Rec. Frankf. Febr. 2d

Poppelsdorfer Schloss

Bonn

21/1/57

Hochgeachteter Herr Doktor!

Besten Dank für die gütigen Mittheilungen über Elodea canadensis u. Nelumbium luteum. Die Angaben, die Sie mir gestern über Elodea machen, stimmen dem größten Theil nach ganz mit denen, die Sie schon früher in Bonn gemacht haben, überein, daß Sie mir noch einige Punkte mehr angeben. Daß der Pollen getrennt war ist, ist höchst auffallend. Quaternären Pollen kommt bei keiner verwandten Pflanze nach meinem Wissen vor: Hydrilla verticillata (die in Ostpreußen), Lagarosiphon muscoides (am Cap d. g. H.) Elodea guianensis (in Südamerika) Elodea densa (Egeria densa Planch. auch in Südamerika) haben nie kugelig vereinzelte Pollenkörner und stets feinen Bau u. Verhältnisse überall. Ich kann mir nur denken, daß die Elodea canadensis an

scheinbar gekrümmt Stellen kann ich sehr junge Blüthen zeigt, indem die Stellungsverhältnisse mir nicht ganz verständlich sind.

Wollten Sie sich der Mühe sich [illegible] unterziehen, so werden Sie bei Braun mein Manuskript, um die [illegible] zu sehen untersuchen können beschreiben [illegible]

Fragen in Bezug auf die [illegible] [illegible] ich würde gern von Ihrer gütigen Aufforderung mich an Ihren Vater direkt zu wenden Gebrauch machen; ich hätte schon viel früher schon vor Jahren mich an Sie selbst gewandt, wenn ich nicht gefürchtet hätte Ihnen lästig zu werden.

Sie werden von Prof. Braun gehört haben [illegible] sehr bedauern, daß ich nicht mehr in Berlin gewesen bin, um Ihnen persönlich zu sehen zu können.

Nochmals dankend ich Ihnen bestens

Ihr ganz ergebenster
R. Caspary.

Was [illegible]! Ich empfehle Ihnen daß der Lithograph Renbke in Berlin, Leipziger Platz No. X. [illegible] kann ich

dort. Er ist sehr geschickt und sehr Vertrauens-
würdig; grüßen Sie ihn bestens von
mir. Er braucht sich ganz und gar an Ihnen
oder allerlei Wichtiges und die nöthigen
Auskünfte zu ertheilen. Er ist mir
lieber als Herr Dr Cohn. Braun
hat freilich auch einmal bei ihm
eine nicht ganz angenehme Erfah-
rung gemacht

R Caspary

Herrn Dr. Engelmann

Rec. Frankfurt
Feb. 2

Poppeldorfer Castle, Bonn
January 21, 1857

Most Honored Sir Doctor !

Many thanks for the kind communication about Elodea canadensis and Nelumbium luteum. The reports, which you give me now about E lodea, agree to a major part with those you made earlier in Bonn, only, that you mention a few more points. That the pollen is

is most surprising. pollen does not appear in related plants according to my knowledge: Hydrilla verticillata (the one in East Indies); Lagorsiphon musicides (Cape of Good Hope), Elodea guianensis (in South America), Elodea densa (Egaria densa Olreich (also in South America), all have ball-shaped, one-celled, flat kernel grain with extremely fine pointlets or spinelets all over. I can only think, that Elodea canadensis seems to show pollen grains on very young flowers, who'se pollen development has not been fully progressed.

If you think it worth your efforts, you will find at Braun my manuscript of the plants, which describes the plants, which I was able to examine.

There are enough questions concerning Elodea, and I shall make use of your kind offer to turn for this to your cousin, and would have much earlier, years ago, turned to you, if I had not feared to be a bother to you.

You will see Braun soon. How much I regret not to be also in Berlin to talk and to listen to you.

Again my best thanks, Your most devoted R. Caspary

Still more ! I recommend to you much the lithographer Renbke in Berlin, Leipziger Platz Nov. X. Everybody knows him there; he is very skilled and eager to serve. Greet him best from me. He will be much inclined to report to you much useful about Berlin. He is much better than Kenny and Cohen. Braun, however, had once a not too pleasant experience with him.

(translated from German Script by Edgar Denison, August 1988)

Rec. May 29th

Bonn
27/5/57

Lieber Herr Doctor!

Bei wem soll ich mir ein Mikroskop kaufen? — bei dem, der die besten macht. — Welches ist das beste Mikroskop? — Dasjenige, welches im Vergleich mit den übrigen, mehr leistet, als die anderen. — Die Antwort wird Niemand bestreiten; fragt man: welcher Instrumentmacher leistet im Vergleich mit den andern am meisten, so kann nur der die Antwort geben, welcher die Mikroskope der bedeutendsten Optiker geprüft hat. Kreigsheim [illegible] zieht Schick allen andern vor. Ich kann also den Ausspruch darauf legen, daß Kreigsheim selbst sagt: er habe persönlich mit einem Nachet nicht genau bekannt, d.h. er kenne die Mikroskope von Nachet nicht. Nachet u. Schick halten gar keinen Vergleich mit einander aus, selbst Benèche ist weit weiter als Schick. Kreigsheim ist parteiisch, oder hat ein Recht [illegible] gegen. Kein Schick, die ich gesehen habe u. hier in Bonn sind allein 3 vorzügliche, zeigt die Streifen auf der Navicula angulata; ein Benèche zeigt sie, obgleich nicht sehr gut, [illegible] als ein Schick u. ein Nachet zeigt sie, wie die englischen Instrumente von Ross, Smith & Beck, Powell & Lealand sehr gut; ein Nachet selbst schon bei einer 380 mal. Vergrößerung u. gewöhnlichem schlechtem Licht, selbst ohne schiefe Beleuchtung; ein Benèche braucht schiefe Beleuchtung. Das größte Bild, der weite Focalabstand, das viele Licht sind bei Schick sehr angenehm; was kann das Angenehme aber helfen, wenn ich nicht dabei sehe, was andere Instrumente zeigen? Übrigens ist Nachet nicht einseitig; er macht 2 verschiedene Objektive; solche die ein kleines Bild, kleinen Focalabstand u. weniger Licht, aber große Klarheit des Bildes haben (die Oberhäuser'sche Art) u. er macht (nach englischer u. Schick's Art) Objektive mit sehr großem [illegible] viel Licht, großem Focalabstand, die aber nach meinen Untersuchungen nie ein so scharfes Bild geben, als die

die erstere Art. ~~Ich [illegible]~~ Um gebräuchlich zu
verschiedenen Zwecken bieten ~~[illegible]~~ Objektiven mit
Wohlfeilheit u. einiger Objektive sollte Sie sehr
bald machen, wie Nachet thut. Ich werde bald
ein Instrument von ihm bekommen, das breit ist;
man sieht mit beiden die Streifen auf der
Navicula. Ich glaube, daß in Berlin Dr. Wagner
am besten Mikroskope kennt, denn er hat viel gesehen, ist
aber natürlich zu einseitig für Oberhäuser gekommen,
der übrigens Nachet jetzt gleich stellt. Wollen Sie aber
auch ein Instrument sich bestellen, berücksichtigen Sie
die folgenden sehr wesentlichen Punkte: 1) der
Tisch muß drehbar sein; 2) der Spiegel muß so
eingerichtet sein, daß er seitliche Bewegung hat
u. schiefe Beleuchtung gegeben werden kann.
Ein Mikroskop, welches diese beiden Erfordernisse
nicht hat, ist nicht zu gebrauchen. Schiek macht
in neuerer Zeit Bilder, wie ich höre, ich habe jedoch
auch kein Instrument der Art von ihm gesehen. Brazi-
keins Instrument, an das er sich nie einmal ge-
wöhnt hat, hat leider nicht sein Bild u. ist nur ~~ein~~
stets matter u. undeutlicher in Ansicht erschienen, als
das ~~[illegible]~~ eines Oberhäuser.
(seit 1849) danach getrachtet so viel Mikroskope zu Ich habe seit Jahren
sehen u. zu prüfen, als möglich. Die englischen halte ich
für die besten, ~~[illegible]~~ aber sie sind unbezahlbar u. haben
einen unnützen Apparat, die französischen stehen denen
u. ~~[illegible]~~ stehen den englischen eigentlich nicht nach;
ihr Preis ist außerordentlich; die deutschen sind wenig
selbständig u. meist nur Nachahmer der französischen.
Amici's Instrumente sind für die meisten Arbeiten, da
die Linsen in Wasser liegen müssen, nicht brauchbar.
Denn man kann ± Reagentien bei ihnen nicht anwenden;
Joh. Müller mag das 1 als Ansehen u. Würdigung haben, aber
nicht als Kenner von Mikroskopen; nach wie vor Ihr Streben.
mit besten Grüßen an Ihre Frau Gemahlin u. Gruß

Ihr ganz ergebenster
R. Caspary

Rec. May 29 Bonn May 27, 1857

Dear Doctor !

From whom shall I purchase a microscope ?? From him, who makes the best. What is the best microscope ?? That, which in comparison with the others works better than the others. Nobody will contest the an - swer; if one asks: Who'se instrument produces more than the others,? Only he can give the answer, who has seen the microscopes of the most prominent opticians. Pringsheim prefers Schick to all others. Thus I can put emphasis on what Pringsheim himself says, that he has no practical experience with a Nachet - i.e. he does not know the microscope of Nachet.- Nachet and Schick do not stand comparison with each other, even Benicke is much further than Schick. Pringsheim and never properly did a test. No Schick, as far as I have seen, and here in Bonn alone are 3, shows the stripes on Navioula angulata; A Benicke shows them, but not very well, always a little higher than in Schick and Nachet like the english instruments of Ross, Smith and Beck, Powell & Lenbach, very well. with Nachet even already at about 380 times magnification and rather poor light, even without cross-lighting; a Benicke must have cross-lighting. The large field, the wide focal distance, the abundant light are very agreable with the Schick; what good is it to be agreable, if I cannot see with it, what other instruments show ?. By the way, Nachet is not one-sided: he makes two kinds of objectives; such with a small field, small focal distance and less light, but with this great shaprness of the image (the Oberhäufer type) and he makes (after english and Schick type) objectives with a very large field, much light, which however according to my opinion, give never as sharp an image as those of the first kind. One needs for different purposes both objectives with advantage, and a good optician should soon fabricate them, as did Nachet. I shall get soon an instrument from him, which has both; one sees with both the stripes on the Navioula. I believe, that

Dr. Wagner in Berlin knows Wickershayn best, because he saw a lot, is however perhaps too onesided influenced for Oberhäuser, who, by the way considers Nachet equivalent to it. Wherever you order an Instrument, condiser first the following three points: 1) the table must be turnable. 2) The mirror must be so installed, that it has all-sided movement, and that cross-lighting can be achieved. A Wickershay, which does not have these two - specially no.2 - can not be used. Schick manufactures both recently, as I hear, but I have not yet seen an instrument of this kind from him. The instrument of Pringsheim, on which he got used to once, does not have either. It's image is always faint and non-distinct in circumference as that of my predecessor. For years, since 1849, I made an effort, to see and prove as many microscopes as possible. I consider the english ones as the best, but they are sky-high (the German word is "unpayable" in verbatim transl. E.D.) and have many useless gadgets (The German word is Aparat = machinery, E.D.). The French follow then, and are really not inferior to the English; Their price is obtainable; the Germans are little indepen - dend and mostly imitations of the French. America's instruments are for most workers, who must bring the lense into water, not useable, because reagents can not be used with them.

Joh. Muller may be known as No. 1 as anatomist and physicist, but not as expert of Wikerhagen; less so Ehrenberg.

With best greetings to your wife and Georg your most devoted

R. Caspary

(translated from German script by Edgar Denison, August 1988)

Ans. Paris 3 Aug

Poppelsdorfer Schloss
Bonn am Rh.
21/7/57

Mein lieber Herr Doctor!

Besten Dank für Ihren werthen Brief! Jetzt erst [illegible], ich habe 16 [illegible] die Woche u. war [illegible] in der Klemme u. [illegible], deshalb Ihren Brief vom 24/6, den ich erst den 28/6 bekam, nicht durch Ihre werthen [illegible] gleich heute beantworten kann. Sie sagen, daß Sie nur 8–10 Tage in Paris bleiben; hoffentlich noch länger nach der Versammlung in Berlin zu erhalten, denn gewiß findet Sie dieser Brief nicht mehr.

Die Mikroskope von Nachet habe ich noch nicht erhalten; die bestellten derselben [illegible] heute u. ich hoffe auch diese bald zu bekommen. Wenn Sie früher kommen könnten um sich noch mit den Mikroskopen zu beschäftigen, so wäre das vortheilhaft u. würde mir ein großes Vergnügen machen Ihnen behilflich zu sein. [illegible] Wenn, wie Sie, [illegible] Kenntnisse [illegible] sind, dürfte wohl auch in wenig Zeit beträchtliche Fortschritte in Handhabung der Mikroskope u. Bearbeitung mikroskopischer Gegenstände machen.

geben Sie ja den Plan nicht auf! An Helmholtz haben Sie für Ihre Physiologie einen der ausgezeichnetsten Lehrer, ich habe [illegible] der Augenspiegel u. beschäftigt sich hauptsächlich mit der physikalischen Theil der Physiologie. Das Mikroskop braucht er häufig nicht sehr viel. [illegible] einen [illegible], der das Mikroskop gut [illegible] weiß ich [illegible] nicht, ich glaube nicht daß einer da ist. [illegible] nicht einmal einen [illegible] hat.

Die mikroskopischen [illegible] finden Sie in London bei:

C. M. Topping
4. New Winchester Street
Pentonville Hill
London.

Ich bezahle [illegible] der einzige [illegible], der [illegible] hat, [illegible] der Rechnung [illegible] [illegible] zu bezahlen. [illegible] [illegible] [illegible] in London [illegible]. Mr. Kippist, Librarian of the Linnean Society, [illegible] erhalten können.

Wenn Sie in England sind, [illegible]

ich Ihnen nicht [illegible] 2–3, [illegible]
[illegible] mitzunehmen, [illegible]
[illegible]
Tausch hat [illegible] Berlin habe
ich jedoch endlich einen [illegible] gefunden,
der [illegible]
[illegible] 10 [illegible] pro Bd. [illegible] Berlin
[illegible] 5 [illegible] = 1 Thlr 20 Sgr. Ich kann sie Ihnen von Berlin aus besorgen.

Ihren [illegible] habe ich [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] zu machen.

Ich bitte Sie sehr mir von Dr. Hooker [illegible]
[illegible]
Berkeley hat mehrere
von mir, [illegible]
an Hooker [illegible]. Ich bitte aber [illegible]
[illegible] Bände zu stellen!!

Beste Grüße an Ihre Frau Gemahlin
[illegible]. Geben Sie [illegible] Mittheilungen
nicht auf!

Mit besten Grüßen
und herzlicher Ergebenheit
Ihr R. Caspary

Verte!

Bald hätte ich sehr [illegible] vergessen. [illegible] Sie auch Delairea [illegible] [illegible] [illegible] zu [illegible] und die [illegible] meiner Abhandlung über die [illegible] [illegible] zu bitten [illegible].

1) [illegible] die Originale der [illegible] zurück, wenn [illegible] so [illegible] als möglich.

2) [illegible] einige Abdrücke meiner [illegible] zu [illegible] [illegible] oder [illegible].

Ich habe [illegible] von [illegible] [illegible] Trevira-nus [illegible].

Rec. Paris Aug. 3

Poppelsdorfer Castle
Bonn on the Rhein
July 30, 1857

My dear Doctor !

Best thanks for your esteemed letter ! Now is the end of the collegia, I teach 16 hours per week, and thus was in a bind concerning preparations, that I can answer your letter of July 24 , which I did not get until July 28, probably through your esteemed sisters, only today. You say, that you will remain in Paris still 8 - 10 days; hopefully longer to judge from the precedent in Berlin, for otherwise this letter will not find you there any more.

I have not yet received the microscopes from Nachet; instead, the purchasers push me both, and I long to get them. If you come here, you could occupy yourself with several microscopes, this would be wonderful, and it would be a great pleasure for me, to be able to assist you. A man as industrious as you, who'se know - ledge is always so all encompassing, could take time out for the significant progress in the manipulation of the microscope and the judgement of microscopic paraphernalia. Do not give up this plan ! In Helmholtz you have here in Physiology one of the most oustan - ding persons. He is the inventor of the eye-mirror and occupies himself primarly with the physical side of physiology , and , of course, he does not need the microscope much. I know nothing of a pathologist, who handles a microscope well, here, I do not believe, that there is one. I do not know really, what pathology means. The microscopical cover-glasses you find in London at: C.M. Topping 4 New Winchester street, Pentonville Hill, London. I al- ways get them from them. The only fault of the man is, that he ne- ver sends a bill, and I have trouble paying for them. He makes quite good preparations. But, may-be. somebody else in London makes better ones. Mr. Kippish. librarian of the Linneen Society will be able to give you information. When in London, I recomend

,to take along cases 2 and 3, for preparations, simply made of pine wood, and not made better anywhere. Topping has them also. In Berlin I finally found a cabinetmaker, who makes them well and cheaper. Topping gets 10 sh, those from Berlin are 5 sh = 1 Thl 20 Groschen. I can get them also from Berlin.

I saw your sisters here, and enjoyed them very much. Disgusting, that I am still a bachelor, and can do nothing for them. By the way, I have been proposed by the faculty as extra-ordinarius. I will make a try, to look up your sisters in the Endenich ~~(??? E.D.)~~, to at least have the honor of a visit.

I ask you, to bring me from Dr. Hooker a small case with . Berkeley has several of mine and i shall write him to send them to Hooker. I ask though, to stand the little case always on the high edge ! !.

Best greetings to your wife and Georg Don't give up the Mistershagen ! With best greeting and heartiest

Your R. Caspary

I almost forgot a very important request ! You certainly will see Decaisen before you leave; please ask him without too much pressure about the publication of my dissertation about fossil Nymphaeaceae, and ask him to:

1) to mail by post the originals of the drawings, when possible and as soon as possible. 2) that he send me several copies of my essay, and that through publisher's or you. I have until now seen nothing of my printed essay. Trevira tells me, that it has been published.

(translated from German script by Edgar Denison, August 1988)

Rec^d Aug [illegible] Kew
Ans. Düren 27 Aug

Poppelsdorfer Schloss
Bonn
13/8/1857

My dear friend.

As you are in England and as I have just written an English letter to Sir W. Hooker, my mind has turned so English, that I write in this language to you.

I am most obliged to you for the 9 copies of my fossile Nymphaeaceae, which you had the kindness to send me. But why did you not take also one for yourself?

I wrote to Sir William to ask him for the favour, that I might figure in my work on Nymphaeacea an excellent native Rhizoma of Nymphaea gigantea, which is in the Kew Museum. I asked him to send me either the rhizoma itself or a drawing of it, made by Mr. Fitch and I hope you will be so kind as to bring either the rhizoma or the drawing over for me. In case

Sir William gets me a drawing
be so kind as to pay it for me to
Mr. Fitch. I want to have the
drawing in its natural size,
or really two:

1. one view taken from the
side

2. one view of the process of
insertion of the leafstalk or
of the process of the insertion of the
leaf, seen from above

I should like much better
to get the rhizome, than a drawing, but I am afraid Sir William
would not like to send me the
rhizome, which I ~~will we~~ should
return as soon as possible.

I called upon your sisters and
I had the pleasure of finding them
at home.

To day I began to sketch a rhizome of Nymphaea alba in full
size for my work on Nymphaeaceae;
~~it are have~~ there does not exist any
faithfull representation of it; it has
always been changed with the rhizome
of Nuphar luteum, which is nevertheless very different.

Believe me, my dear friend, yours
very truly and affectionately
Robert Caspary.

Rec. Aug.17 (?) Kew
Ans. " 27 Duren

Poppelsdorfer Castle Aug. 13,1857

My dear Friend

As you are in England and as I have just written an English letter to Sir Hooker, my mind has turned so English, that I write in this language to you.

I am most obliged to you for the 9 corms of my ~~[illegible]~~ French? (? E.D) Nymphaceae which you had the kindness to send to me. But why did you not fetch also one for your order ?

I wrote to Sir William to ask him for reference, that I might figure in my work on Nymphaceae, an excellent native rhizoma of <u>Nymphaea gigantea</u>, which is in the Kew Museum.- I asked him to send me either the rhizoma itself or a drawing of it, made by Mr. Fitch and I hope, you will be so kind as to bring either the rhizoma or the drawing over for me.- In case Sir William gets me a drawing, be so kind as to pay for me to Mr.Fitch. I want to have the drawing in its actual size, or really two:

1. Over-view taken from the side.
2. One view of the process of insertion of the leafstalk, or of the process of the cushion of the leaf seen from above.

I would like much better to get rhizoma than a drawing, but I am afraid Sir William would not wish to send me the rhizoma, which I would return as soon as possible.

I called upon your sisters and had the pleasure of finding them home.

Today I began to sketch a rhizoma of <u>Nymphaea alba</u> in full size for a work on Nymphaeaceae. There does not exist any faithful representation of it; it has always been changed (should be "mistaken" E.D.) with the rhizome of <u>Nuphar</u>, which is nevertheless very different. Believe me, my dear friend, your very truly and affectionately

Robert Caspary

(transcribed from script in english by Edgar Denison, Jupy 1988)

Rec^d Frankf. 13 Nov
Ans — 7 Dec.

Poppelsdorf
9/11/1857

Mein lieber Freund!

Besten Dank für Ihren werthen Brief und den Nachrichten über Nuphar advena und Nelumb. luteum; aber es ist Unrecht, daß Sie auch nicht ein Wort über Sich, Ihr Ergehen und die Ihrigen, oder über Ihre Pläne geschrieben, obgleich ich natürlich sehr gern etwas [illegible] über Sie wüßte.

Es ist sehr freundlich von Ihnen, was ich mit Dank annehme, daß Sie nach Amerika geschrieben haben, um Beobachtungen über die beiden Nymphaeaceen einzuziehen. Allerdings ist die Beschreibung des Nelumb. etwas [illegible] in der Figur. Daß die [illegible] kürzern dickern Internodien sich von den unteren 6 Zoll langen unterscheiden, ~~Die~~ [illegible] selbst nach der Zeichnung 6 Zoll lang [illegible], ist nicht anzusehen. Ich vermuthe, daß mit den kürzeren "Internodien" gar nicht die "Ästchen", [illegible], die sehr wohl [illegible] sein können, die [illegible] sehr [illegible] Gestalt [illegible] in [illegible] Formen gehabt haben, gemeint sind, sondern

Die 2 Arten. ~~[illegible]~~ Internodien zwi-
schen je einem (zwei) langen. Nelumbium
nucifera L.:

l lange Internodien, [illegible] [illegible]
[illegible] [illegible], bis 1½ Fuß lang
K u. K' zwei kurze Internodien.
I erstes Blatt, nach unten gekehrt.
II 2. Blatt, unter ½ Divergenz, nach
oben gekehrt.
III 3. Blatt, Laubblatt. Dieses steht
in [illegible] [illegible] zu [illegible] [illegible], [illegible]
[illegible], A. Braun, zu Blatt 2. unter
½ Divergenz, obgleich beide nicht [illegible]
stehen.
s Stipula zum Laubblatt
a Ast in dessen Achsel.
In der Achsel des Blatt II steht die Blüthe.
Trecul, der [illegible] untersucht hat, hat in
mehreren Aufsätzen [illegible] zur [illegible] I,
II u. die Stipula für 3 Stipulae des Laub-
blatts erklärt u. die Blüthe übersehen. Der
Ast hat das 1. u. 2. Blatt auch in Stellungen

Richtung, doch dasselbe kommt ja öfter vor. Was ich da sagen hat übrigens die Gewächshäusern von Bonn, aus denen ich manches [illegible] gekommen [illegible] in Berlin die Pflanze untersucht habe, was ich die richtigen Verhältnisse der Blattstellung nicht unwesentlich; aber doch ich habe einen Schluss daraus [illegible] Verschiedenheiten zu der [illegible] natürlich. Uebrigens zeigen sich keine [illegible] der Umstand bei der [illegible] Blattstellung [illegible], daß Blatt I von der Achse, die [illegible] und nach oben gebogen wird, also:

Blüthe

II

a

I

o

R

l

l

S

A

bei A Lage der Durchbrechung. I hat also nach R den Rücken & nach O die Innenseite.

~~Nuphar~~ Nelumb. luteum ist davon gar nicht von Nel. speciosum verschieden wenn die Pflanze, die mir Wendland früher als Nel. luteum geschickt hat, dasselbe war.

Die [illegible] [illegible] [illegible] die

dieser ~~[illegible]~~ [illegible] Rhizoma
des Nelum. spec., [illegible]
[illegible] von Dr. Hilgardt
abgebildet, ist auch dieser; v. Siebold hat
mir Abbildungen gezeigt. [illegible]
[illegible]
ob Nel. luteum [illegible]
[illegible]
Unterschied [illegible]
[illegible]
bei Nel. ~~[illegible]~~ speciosum [illegible]
[illegible] Unterschied [illegible]
Nel. luteum [illegible] Nel. spe-
ciosum [illegible] — [illegible]
[illegible]
Garten zu kommandiren, [illegible]
[illegible]
[illegible]
[illegible]
[illegible] von Nel.
luteum [illegible] Nelumb. codophyllum Raf.
ist, [illegible]
Botaniker ohne Garten [illegible]
[illegible]
[illegible]. Bouché ist [illegible]
[illegible]
[illegible]
zu [illegible]
[illegible]

über Jahr ausgedacht ~~[illegible]~~ Lichtwan,
zur Vermittelung genannter Beeren, die ich
gestellt habe, anzustellen. Sinning[illegible]
zu schicken auch; ich habe von ihm so gut
wie gar nichts in dem hiesigen Garten. Man
sollte nicht meinen, daß ein Gärtner so
aufsätzig sein könnte, beim besten Willen
Lichtwan nicht besser [illegible] das ich wünsche
[illegible]. Nach 1/2 – 2 Monaten
ist jedes Mal alles zu Ende. Wie lange
Jahre Nymphaea alba & b. [illegible], zu
zu blühen von der Leitung an, ich weiß nicht
[illegible]. Im vorigen Jahr bat ich Sinning
sehr gehorsamst [illegible], in einem
[illegible], [illegible], [illegible], ein [illegible]
[illegible] stand alle [illegible]
[illegible] und 100 Sorten gegangen
[illegible], ich [illegible] war, wo
ich [illegible] haben möchte; jetzt [illegible]
Sinning zu meinen Arbeiten zu ge-
brauchen [illegible] angewendet.
Ich wünsche ich es [illegible] bei besten Kräften,
die Sache zu ändern, mein 2 [illegible], [illegible]
[illegible] Treviranus u. Sinning
die besten Mittel (der Garten hat 2500
Thlr.) [illegible], [illegible] ich [illegible] Kleinmann
[illegible] hat, als [illegible] Blättern
u. Blüthen [illegible], welche im Garten
[illegible] werden.
Der Herr Emmy Lichtwan [illegible] jetzt

weiter nichts zu geb[en], wie eine einzige
Pflanze, wo die angewandten Mittel
gute Dienste thaten; [illegible]
[illegible]
Braun [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
Colchicum [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] 60. Treviranus [illegible]
[illegible]
[illegible]
[illegible] 100, [illegible]
[illegible] 4 [illegible]
[illegible] Nymphaea alba [illegible]
[illegible] Naegeli [illegible]
[illegible]
[illegible]
[illegible]
[illegible]

Ihr

R. Caspary

Rec.Frankfurt Nov.13 Poppelsdorf Nov. 9,1857
Ans. Dec. 7

My dear Friend !

Best thanks for your letter and the news about Nuphar ______ and Nelumbo luteum ; but it is wrong, that you do not write even a single word about your health and your family, or about your plans, though I would like naturally to know something, or,rather a lot about you. It is very kind of you, and I acknowledge my thanks, that you have written to America in order to obtain information about the two Nymphaeas. Of course, the description of the Nelumbo is somewhat incomplete, as you say. One can not see, how the shorter,thick internodes differ from the other, 6" long ones,which, according to the sketch are themselves 6 " long. I assume, that the shorter internodes do not refer " at all to the thick" , flour-rich,which could very well be woody,meaning,that they have very woody cross cuts and flour-rich parenchyma,but rather the 2 short internodes between each od two long ones. Nelumbium shows them:

(see drawing on page 2 of letter)

C long internodium; at most finger-thick in greenhouse, but to 1½ feet long

K and K' Two short internodia

I first leaf, turned downward

II second leaf, under ½ divergence,turned upward.

III Third leaf, foliage leaf,positioned in an unheard of way without exemple,as far as I know,meaning Braun,with 1/1 divergence with leaf 2,though both stand in the middle of the stem

s stipule to foliage-leaf

a branch in .... axil

In the axis of leaf II stands the flower

Torcel, who examined poorly, declared in several theaties in carefull ways, that I, II and the stipule were 3 stipules of the foliage-leaf, and overlooked the flower. The branch has the 1 and 2 leaf also in the same direction, but this happens often. What I say here has all the approval of Braun, with whom I examined the plant still in the Fall in Berlin. The correct arrangement of the leaf position has not yet been published; but anyhow, I have remarked about it in the agenda of the Rhenish-westphalian Nature science Society. Besides, it is surprising, that with the difficult position of the leaves, that leaf II is being drilled through by the axis, which continues growing and comes to rest on top, e.g.

(see drawing on page 3 of letter)

Near A hole of drilling through. II - has now "R" the back and also "O" the inside. Nelumbo luteum is in this not at all different from Nel. speciosum, if the plant, which Wensteed (? E.D.) sent me, was that.

The Japanese and East Indian species have the thick, flour-rich rhizomes of the Nelumbo species, which look exactly like the illustrations by Dr. Kilgardt (could be Wilgardt ? E.D.), often even thicker; v. Siebold never showed illustrations. In the greenhouse they neither get as thick nor as floury (mealy, E.D.). If Nelumbo luteum is a species, is very doubtful to me. I know of no difference but that of , which is linear for it, whereas the Nelumbo species are , thus a very small difference. - I wished, I were a professor and had to boss a large botanical garden, then I would examine the matter by cultivating both plants in quantity. May-be, you can send to me later sometime seeds of Nel. Luteum. What Nelumbo rodophyllum is, I know even less. A botanist without a garden and attentive gardeners is in bad shape.

Brecks ' is very accomodating and has done much for me, but he is unable, because I have nothing officially to say, to apply himself so much to my cause, that he would organize lectures spread over the years, to explore questions, which I have posed. Finning here is'nt good for anything; I have almost nothing from him in the local garden. One should not believe, that a gardener would be so incapable, to maintain his best mother (? E.D.) cultures, which I wished to pursue. After 2 - 3 months all is at an end every time. How long it takes e.g. for Nymphaea alba to flower from the time of germination, is unknown. Last year I gave Finning numerous seedlings in a basin for cultivation; well, in the Spring of this year he threw them all out. That is the way it went with 100 cases and more; I thus apportion only, what I must have urgently; every attempt to use Finning for my efforts ends in vexation. Thus I must look, to change the matter to the best of my ability, as two useless human beings, Trevianus and Finning waste the best of resources (the garden has $ 2,500), so that I and nobody else gets anything out of it, except several male and female cousins of Brugwutter, ?? E.D. of which the garden is amply provided.

Mrs. Emmy Eichhorn is again not doing as well as a few weeks ago, when the applied remedies did good work; she is with the family, and goes once in a while out again. Braun however, is not at all really well; since he had the he was

Now he suffers from a rheumatisme, which drawn from the arm to the breast in the direction of the heart with pains in the breast and palpitations. When he feels very week, he takes Colchicum. He is also very discontent with the collegium, which during Winter is always poor for botanists. He has in the officinal flowers (plants, which are used for therapeutical purposes, E.D.) only 7 hearers

(the German word for "enrolled students" E.D.); in the public (Public lectures, E.D.) (General Natural History) there are 60. Trevianus has 2 students as his audience; and I have 1 as Private docent and 1 in public lectures. Those are nice feelings ! In Summer I had over 100, but nobody comes any more ~~whenxit~~ for exams. - I have worked the last 4 weeks on the cellular structure and in the stem of Nymphaea alba, and had finally yesterday and today results.- Naegeli is totally wrong. The matter is too long to be expressed in the remaining lines. Best greetings to your wife and Georg. With best greetings Your

R. Caspari

(translated from incredibly poor German script by Edgar Denison
July 1988)

Rec: Frankf. 11 Dec.
Ans 13 Dec

Poppelsdorfer Schloss
Bonn
den 8. December 1857

Lieber Herr Doktor!

Besten Dank für Ihren [illegible] Besuch, den ich aber verschlafen habe (Abends 7 Uhr). [illegible] ein [illegible] [illegible] Mensch; [illegible] [illegible] erkenne ich mit größtem Dank an, [illegible] [illegible] [illegible] [illegible] [illegible] sind. Ich danke Ihnen sehr für die Abbildung der Nymphaea [illegible] Ihren [illegible]; [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] vorgekommen. – Sie sagen Sie hätten auch [illegible] [illegible] [illegible] einen [illegible] [illegible] gesehen. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] Beschreibung, [illegible] [illegible] [illegible] [illegible] [illegible]?

[illegible] beantworte ich Ihre Fragen: ob ich in Wien [illegible] zu bestellen habe? Grüßen Sie Fenzl, Unger, [illegible] Kotschy; [illegible] [illegible] ich [illegible] [illegible] zu sagen [illegible] [illegible], [illegible] [illegible] [illegible] allemal [illegible] [illegible] ein Exemplar [illegible] die Bibliothek nach Bonn schicken, [illegible] [illegible] Universitätsbibliothek [illegible] [illegible]. [illegible] [illegible], [illegible] [illegible] ich Ihnen gern ein Buch für Fenzl mit; einen Theil von Weddell's

[Marginal note, written vertically: [illegible]]

Untersuchungen, den Aufsatz, wie den Zettel geschickt habe ich nicht. Ich ihn aber jetzt gerade zu schicken. Sollte es Ihnen möglich sein auch das Werk von Ettings-hausen u. Pokorny mit den Blättern und den Naturselbstdrucken von Nymphaea alba u. Nuphar luteum zu beschaffen, sie werden mir das sehr lieb; ich habe sie bis jetzt nicht gesehen. Das ganze Werk kostet 400 fl. u. ist leider nicht vorhan-den. — Wie lang werden die langen u. kurzen Internodien des Trachsfeld? Nelum-bien? Die längsten 1 1/2 – 2 Zoll? aber nicht dicker als ein Zeigefinger; die kurzen Internodien etwa 1/3 – 1/2", auch ist nicht mehr. — Frau Emmy Lichtkorn befindet sich ziemlich wohl u. ist jetzt einmal in Aachen gewesen. Letzter ist Max Braun's älteste Tochter ganz kürzlich die Masern bekommen, die jetzt wohl die Reihe durch die ganze Familie machen wer-den. — Daß Ihre Frau krank ist, thut mir sehr leid; hoffentlich bessert sie sich bald; sie hatte später in Ameri-ka sich ganz gesund gemacht, jetzt steht Ihr ja eine schöne Reise bevor. Ich ginge gern mit Ihnen, noch lieber aber nach Aegypten, um ein-mal an Ort u. Stelle die lebenden u. den auch stark verzweigten Nymphäen zu sehen u. werde mich Pesth mit den

[illegible]

Kaiserlichen [illegible] die [illegible] mal
zu sehen, der [illegible] schickt neulich zur
[illegible] die Hermann [illegible] erhalten hat.
— Um Ihr Mikroskop kannst Du [illegible]
ruhig sein, es ist ganz gewiß vorzüglich. [illegible]
hat sich überzeugt, daß [illegible] habe neulich mit
von Nachets großen Instrumenten [illegible]
gesehen. Einer meiner Zuhörer, der
sich es bestellt hatte, zeigte es mir. Es
ist ein [illegible] [illegible] [illegible] und
man [illegible] mit Mikrometern noch
[illegible] an [illegible] [illegible] ein vollkommen
neues Instrument erhalten können.
— Ihre Fragen, warum es mir gefällt? Be-
greiflich gar nicht. Ich möchte gegenwärtig
in jeder [illegible] [illegible] [illegible] in [illegible]
die Welt [illegible] kommen. Es ist kaum [illegible]-
nigkeit zuzusehen zu müssen, wie ein
alter, [illegible], [illegible], fast kindischer
Mann den [illegible] [illegible] [illegible]
botanischen Interessen, [illegible] [illegible] ihm
in [illegible] kommen, [illegible] [illegible] [illegible]
[illegible] [illegible] zu [illegible] [illegible], [illegible]
[illegible] [illegible] mit [illegible] alles in
guten Zustand halten könnte und auch [illegible]
[illegible] zu [illegible] [illegible] [illegible], fast [illegible]
[illegible] Gartenarbeiter einen botani-
Garten, der 2500 Thlr [illegible] hat und
der eigenen Arbeiten nicht [illegible] [illegible]
könnte, [illegible] [illegible] [illegible] [illegible]
[illegible] den Interessen die man hat.

[illegible], daß der Garten vollständig [illegible] ist. Was ich brauche, [illegible] ich jetzt [illegible] aus Berlin. [illegible] ist immer [illegible] zu [illegible], aber [illegible] [illegible]. [illegible] wenn er es [illegible], [illegible] zu [illegible], [illegible] [illegible]; [illegible] in [illegible] oder [illegible] [illegible] haben, [illegible] an [illegible]. [illegible] Vergnügen. — Durch die Untersuchung habe ich Nymphaea alba, Victoria regia, [illegible] u. Nym. Lotus dentata [illegible]. Zum Blatt sind 1–16 Gefäßbündel, [illegible] nicht 1 wie Naegeli behauptet u. [illegible] mittleren Gefäßbündel [illegible] für die [illegible], obgleich Naegeli [illegible] zu [illegible] behauptet. [illegible] an den Nymphaeen [illegible] [illegible] 1 [illegible].

Noch eine Bitte an Herrn [illegible] Gay [illegible]. Er möchte gern 1–2 gute [illegible] von Sternbergia colchiciflora haben, [illegible] [illegible], [illegible] [illegible], [illegible] in Berlin [illegible]; Bartling in Göttingen, [illegible] [illegible] in Wien 1–2 [illegible], [illegible] von Gay [illegible] [illegible]! [illegible] an Ihre Frau u. Garay. Mit besten Grüßen

Ihr R. Caspary

Rec. Frankfurt Dec. 11
Ans. " 13

Poppelsdorfer Schloss
(Poppelsdorf castle)
Bonn December 8,1857

Dear Sir Doctor !

Left-hand margin of page 1 :

At Braun almost all are sick. He and his wife are half well. Ernst and Caecilia have poorly developed scarlet fever, and in combination bad rheumatic fever over the entire body. Hermann has real scarlet fever, and Mathilde has also become indisposed. My fiancée is still well.

Best thanks for your esteemed letter, which I received just now (evening 7 o.c.). You are a kind, sympathetic person; that I enjoy and accknowledge with much thanks, the more so, as such people are so rare. I thank you much for the illustrations of the Nymphaeae with your greetings; I never met with this composition before, when you say, that you saw in the British Museum an egyptian papyrus. How did it look, probably also as shaped as with the and without flower.? First I amswer your questions. If I have anything to be arranged in Vienna ? Greet Feazl and Unger and Notsky; I do not know more people there, and tell the people, they should send a copy of all they write to the library in Bonn, because this library has need for that. If you were here, I'd give you a book for Feazl: a part of Weddell's Urticaceae, which he has sent to me for Feazl, but I shall send it now . If you should be able, to get for me out of the opus of Effighausen and Soivony the pages with the nature-self-prints of Nymphaea alba and Nuphar , I would be much obliged; I have not seen them up to now. The entire opus costs 400 fl (florin, E.D.) and is not available here. How long get the long and short internodes of the ~~of the~~ Twerthaus Nelumbo ? The longest ones are 1½ - 2 feet, but not thicker than a forefinger; the short internodes about 1/3 - ½ ", and even that mostly not.

Mrs. Emenz Eichhorn is rather well, and has been recently in Aachen.

Unfortunately, Marie Braun's youngest daughter got quite suddenly the measles, which will probably ~~will~~ go through the entire family.- I am very sorry, that your wife is sick; hopefully she will get better soon; to be sick, there is later much time in America; now, a beautiful trip is ahead of her. I'd love to go with you, to see in their proper place the living and genetically related Nymphaeae, and would touch Scott with the emperor's beard, to see there the N. lotus, which Deb. elevated entirely wrong to the species N. thermalis.- From this Mihowskey also separated it. It must be extraordinary, of that I am convinced. I recently had here one of Nachet's large instruments; one of my students, for whom I had ordered it, showed it to me. It is a joy to work with, and one has to return to one's own imperfect instrument with repugnance.

You ask, how I am ? Really not at all. I am forced to learn patience at this time in the hard school without loss of time and resources. It is not a small item, to have to be a spectator while an old, run-down, dull almost childish man reads the principal collegia, and who mixes up the botanical interests, as far as they get in touch with him, thoroughly in all directions and destroys ~~them~~ with ease, what could be kept in good shape. And, when one must observe, how a vain, almost useless garden inspector, who manages a botanical garden with a budget of 2,500 Thaler (Dollar, E.D.) so poorly, using them for his own interests, to such an extent, that tha garden is totally useless. What I need, I order always from Berlin. Neering is always most eager to be of help, but always explains "What he has he gives, when he has it in quantity," specially flower arrangements for engagements, baptismes and dinners, and balls; if you or your friemds in Frankfurt have the need, then turn to him. Dinning serves with pleasure.- Since the meeting I

analyzed Nymphaea alba, Victoria regia, ,and Nym. Lotus. In the works are 1 - 16 vessel-bundles, do not germinate (as Naegeli demands,and the middle vessel-bundle of the leaf never goes to the lower bundle,though Naegeli demands this with caution) I do nothing else, but work on the Nymphaeae, I lecture only once per week.

One more request in the name of Gay and for him, I would like to have 1 - 2 good tubers of Sternbergia colchiciphera (phora ?) ; there are none in Paris; one I sent him from Finning, which gave .... only from leaves,as he had it from old times; in Berlin there is no plant; Barthing in Göttingen, to whom I wrote,did not answer. If you can obtain in Vienna 1 or 2 tubers,please send them by mail either to Gay or,first, to me, as you please. Now, stay well. Best greetings to your wife and Georg. With best greetings

Your R. Capary

(translated from German script by Edgar Denison, July 1988)
A few words I could not decipher - they are underlined in yellow

Recd. Paris 31 May
Ans Kew 5 Jun

Poppelsdorfer Schloss
Bonn am Rh.
den 29. Mai 1858

Mein lieber Herr [illegible]!

[illegible] Nelumbium [illegible] Nymphaea [illegible] 10 [illegible] Uhr [illegible] (8 Tage) [illegible] Nelumbium [illegible]

Rec. Paris 31 März [illegible]

[illegible] der besten Melonenbaum – [illegible]

[illegible] Kürbisbast der [illegible]

und [illegible] habe ich vor einer Woche

an Dr Braun nach Rom geschrieben

u. einen Brief, mit dem einige andern

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] Italien [illegible] geschrieben

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Marie u. Caecilie Braun [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] Braun [illegible]

[illegible]

[illegible]

[illegible] 280 [illegible]

[illegible]

Allium ursinum, [illegible] ... [illegible] Pflanze, [illegible] haben? sind, Narcissus pseudonarcissus, Lathraea squamaria u. dgl. — Alex. Braun ist zu Pfingsten bei Dr. [illegible] in Neckarau? zum Besuch gekommen, [illegible] — die Hydrillea? sind [illegible]; ich habe Ihnen ein Exemplar [illegible]. [illegible] 12 [illegible]. [illegible] Grönland, Brasilien, Dalmatien?, Aragonien?, Weddell wird nach [illegible] nach Bagnères de Bigorre [illegible] Brasiliens?, [illegible] Mitglied der Leopold. Carol. bekommen hat? Ich schickte es ihm [illegible] — Ich [illegible] Ihnen [illegible]

nächstens zu Ostern zum 2. Mal in [illegible]
[illegible] von der [illegible] zur [illegible]
wenig vorgeschlagen, daß der Minister sich
als [illegible] Grund zu nennen; aber
der Kommandant [illegible] eigensinnig [illegible]
[illegible] alle Wünsche [illegible] sich auch eine
Befriedigung erwarten. — Mein Bücher u. [illegible]
[illegible] zu Weihnachten [illegible]
von 100 Thlr. als Geschenk [illegible]
[illegible] über den [illegible]
[illegible]! In größter Hochachtung [illegible] Ihr

R. [illegible]

Dr. Georg Engelmann

Dr. G. Engelmann St. Louis

Koenigsberg in Pr.

Rec'd Sept. 20.
Ans. Nov 12

10. Februar 1865

Lieber Freund!

Empfangen Sie besten Dank für Ihren werthen Brief vom 12. Decbr. 64, den ich vor Kurzem durch Dr. Br. erhielt. Die Nachricht, daß es Ihnen endlich gelungen ist Nelumbium luteum von Ritter [illegible] zu lassen und auch sogar eine Landschaft mit Nelumbium etc. mir schickt, [illegible] und [illegible] zu viel von meiner Bitte von Ihnen eine so vortreffliche und kostbare Gabe als Geschenk annehmen zu sollen. Sie [illegible]: ich hatte Sie sehr gebeten: diese Sachen für mich malen zu lassen auf meine Kosten. Jedoch, da Sie jetzt mir eine so [illegible] Gabe als Geschenk senden wollen, kann ich sie nur unter einer Bedingung annehmen: daß Sie mir gestatten Sie auch [illegible] mit [illegible] Bitten anzugehen und daß ich mich nicht [illegible] von solchen Bitten abhalten lassen darf, daß [illegible] Auslagen verursachen, die Sie dann aber in der That auf meine Kosten machen wollen. Ich freue mich sehr wie ein Kind auf Ihre Sendung, die ohne Zweifel setzen Sie mich dadurch in den Stand zum ersten Mal eine wirklich gute Zeichnung von Nelumbium luteum, wie es im Vaterlande [illegible] ist, zu veröffentlichen. Auch bitte ich sehr, sehr mir Ihre Zeichnungen und Alkohol-Exemplare von der Pflanze zu schicken. Ich kann alles gebrauchen und die meisten [illegible] je mehr man sieht und untersucht desto genauer [illegible] sind die Angaben. Sehr lieb wären mir auch noch Zeichnungen, welche [illegible] möglichst die Pflanze [illegible] und mit den [illegible] in den Entwicklungszuständen zu betrachten. [illegible] halte ich es, daß Sie die Sachen durch den [illegible] schicken; [illegible].

Parry's Nuphar [illegible] ist wirklich eine gute Art und recht eigenthümlich. Sie machen mir die Mittheilung nach seinen Notizen. Sind diese schon gedruckt? [illegible] nicht! Sollten sie irgend wo gedruckt werden, so bitte ich sehr um Zusendung des Gedruckten.

Ich bitte Sie auch sehr, daß Sie es irgend wie zu bewerkstelligen suchen, daß ich die Pflanze selbst (Nuphar

blühenden) zu sehen bekommen. Ich weiß diese Pflanze auch deshalb, von der Sie mir schon einige Male schrieben, daß Torrey sie in d. Rocky mountains gefunden hat ~~hat~~, obgleich ich sie noch nicht zur Beobachtung erlangt hätte u. von der Sie mir kürzlich mal ein Stück Separatum schickten, daß ich alle meine von meinem Nuphar [illegible] bezeichneten, da es durchaus keine Staubfäden mit Zinnober zeigte? Ich bin begierig zu sehen, ob es wirklich ganz keine Staubfäden hat.

Ich habe an bekannter Stelle geschrieben: „die Nuphar advena ist die [illegible] mit karminroth gefleckten Blumenblättern u. Spitzen der Staubfäden, als die ganz gelb gefärbte". Sie fragen: wer diese Ansicht hier kennen? Sie hätten sie immer nur gelb gefärbt [illegible] Schriften (Elliott, Gray, Beck, Torrey) auf. Elliott u. Beck habe ich nicht zur Hand. Torrey (Fl. New-York 1843. I 40) giebt aber die Farbe der Blätt. u. Stam. nicht an, ebensowenig Torrey & Gray (Fl. North. Amer. I 57.). In meinem Auszuge aus Asa Gray's Manual habe ich leider nichts über die Farbenangabe. Dagegen bildet Aiton (Bot. Mag. XVII 684) die Blüthe mit Stam. ab, deren Connectiv u. die Ränder der Antheren roth sind, (Reichenb. Fl. exot. I t. 12 bezieht sich ~~[illegible]~~ auf [illegible]) — aber in der Beschreibung erwähnt Aiton nichts vom Roth. Die einzige [illegible] geschöpfte Abbildung der Nuph. advena (Willd. hort. berol. t XXXVIII) hat die Stam. gelb (Roth nicht zu sehen). Aiton (hort. Kewens. 1789. II 226.) nennt die Blätt. zwar lutea-flavicantia u. die Filament. flava, aber „medio rubra". Muhlenberg (Cat. Pl. Am. sept. 1813. 52) nennt Nuphar advena „striped flowered" u. ~~lutea~~ Nuphar lutea „yellow-flowered". Das „striped-flowered" geht doch wohl nur auf die rothen Streifen, welche die Ränder der ~~[illegible]~~ Antheren zeigen. Immerhin [illegible] ~~[illegible]~~ [illegible] blüthe von Nuphar advena bekannt — ich untersuchte sie [illegible] u. in verschiedenen Jahren und den hort. Lipsiens. [illegible] der gelb. (der meisten) immer 1 großen oder 2 kleine rothe Flecken gehabt hätte. Die Antheren sind ich [illegible] roth gerandet. An dem [illegible] getrockneten Material,

Daß ich [illegible] kenne ich natürlich die Farbe nicht erkennen, die meisten Autoren, die zu [illegible] Material beschreiben, [illegible] der Farbe der einzelnen Theile nicht oder [illegible] Beschreibungen sind [illegible]. Wenn einige [illegible] z. B. Darlington (Fl. Cestrica) die [illegible] gelb [illegible], so fühle ich [illegible], daß sie die Farbe in vollständig [illegible] angeben, denn ich [illegible] in frischem Zustande [illegible] gelb. [illegible] unvollständigen Farbenangaben. Sie [illegible] die gelb von Nymph. odorata W. (Ventura Co.) [illegible] als blau [illegible]; sie sind nie blau, [illegible] gelblich. Es ist [illegible] daß ich [illegible] über die Farbe der gelb[illegible] Staubfäden von Nuphar advena [illegible], [illegible] gleichmäßigen [illegible], [illegible] vollständig [illegible] gelb (auch Stam.?) [illegible]. Ich möchte [illegible] Sommer [illegible] Punkte [illegible] Lokalitäten [illegible] zu [illegible] zu lassen. Aber [illegible].

Sie haben zu [illegible] Nymphaea odorata [illegible]. Ich habe Nymph. odorata [illegible], [illegible] Material in Alkohol, [illegible] Dr. Ida Agassiz [illegible], [illegible] Varietäten kann ich [illegible] Pflanze nicht [illegible]. [illegible] der Varietäten [illegible]: [illegible] (var. [illegible]) [illegible] Varietät zu bilden. [illegible] Pflanzen [illegible] auch [illegible]. In [illegible] sind [illegible] Varietäten [illegible] Gestalt der [illegible], [illegible] der Blätter [illegible] 2. [illegible] Merkmale [illegible] Farbe [illegible]. Ich [illegible] Gestalt der Blätter [illegible] Varietäten von Nymphaea odorata [illegible]. Nach Analogie von Nymphaea alba — [illegible] über die [illegible] (Appendix bot. [illegible] 1854(?)) — [illegible]. [illegible] Nuphar advena [illegible] Liste der Punkte [illegible], die [illegible] Pflanze zu berücksichtigen sind. [illegible]

[illegible] der Dinge selbst sehr freuten.

Ich wünschte in meiner Arbeit einen geschichtlichen Theil zu geben, der die Biographie der Männer, die sich ihr Leben [illegible] und die [illegible] gegeben haben, enthält. Daher bitte ich Sie sehr um zu einer kurzen Skizze Ihres eigenen Lebens und Parry's zu verhelfen. Ich wünschte Jahr und Ort der Geburt, Familienverhältnisse und womöglich [illegible] Darlegung des Entwicklungsganges in kurzen Zügen, wie eine vernünftig geschriebene Curriculum vitae in einer Promotionsschrift [illegible].

Grüßen Sie Ihre Frau recht sehr und Ihren Sohn(?). Es geht uns hier recht gut. Meine Frau ist sehr angestrengt dadurch, daß der jüngere Knabe: Johannes, geboren 19. Novbr 1863 die meisten Nächte sehr wenig, oft fast gar nicht schläft. Aber er ist [illegible] bei Tage sehr frisch und lebhaft und kräftig und [illegible] Nahrung [illegible], [illegible] und noch einige Milch. Das ältere Mädchen: Mathilde, geboren 30. März 1861 macht viel viel Freude, da es ein sehr hübsches Kind ist, das mit seinem ausgezeichneten Gedächtniß schon bloß vom Vorsagen ganze Bücher von Gedichten auswendig weiß. Es kennt schon sehr viele Pflanzen; alle in Decaisne's(?) [illegible]. Im Sommer werden wir uns photographieren lassen, und sollen Sie auch eine Photographie von uns haben. — Das Ministerium hat mehr als 8000 Thl zum Bau eines Gewächshauses, — des größten von allen — [illegible] bewilligt. Der Bau ist voriges Jahr begonnen, aber leider nicht vollendet und ich fürchte, es wird dieses Jahr zu spät erst fertig werden um noch erfolgreich dieses Jahr Nymphaeaceen darin zu ziehen. Ich habe sonst aber unserem Garten in der Häuser [illegible], [illegible] Nuphar advena und [illegible] Dann gezogen. Aber von 12 Stück ist nur noch 1 Pflanze da; [illegible] ist ihr hier doch wohl der Sommer zu kalt. Sie hat nur 2–3 Mal geblüht. Von ausländischen Nymphaeen habe ich eine ganze [illegible], [illegible] Nymph. rubra Roxb. ist; es ist eine N. alba, aber die Varietät muß ich erst durch weitere Beobachtung feststellen. Ich habe 5 Pflanzen 1863 im Herbst erhalten. Ebenso habe ich jetzt alle Häuser voll Nymphaeaceen-Bastarden, [illegible] in großen Zuchten. Ich beobachte [illegible] Richtungen um [illegible] festzustellen. Die [illegible] ist sehr, sehr viel Zeit und [illegible] der Botanik würde ich [illegible] noch, bis die Blendlinge von Nymphaea alba blühen, die jetzt erst 2 Jahr alt sind. Brasenia [illegible] habe ich auch gesammelt(?); [illegible] hat sie noch Niemand in Europa aber zum Blühen bekommen ist sie nicht. Hätten Sie nicht Gelegenheit mir [illegible] Adresse zu geben, der Cabomba caroliniana und [illegible]

Rec. Sept. 20 (why the 7 months delay ?) E.D.
Ans. Nov. 12

Königsberg in Preussen
Feb. 10, 1865

Dear Friend !

Receive my best thanks for your letter of Dec. 12, 1864, which I received recently through A.Br. (Prof. A. Braun, E.D.). The news, that you were finally successful to have Nelumbium painted by Ritter, and even in a landscape with Nelumbium, is most, most welcome. It seems to me to be too much for my part, to accept such an outstanding and costly present as a gift. You know, I had asked you strongly, to have these items painted at my expense. But now, that you want to send to me such a gratifying gift, I can only accept this under one condition: That you permit me to approach you with various requests, and that I am not prohibited from such requests herewith, and that, if these will cause expenses, you will make them at my expense. I anticipate with joy your shipment just like a child, because without doubt you put me into positions therewith, to publish for the first time a really good drawing of Nelumbium luteum as it is colored in its homeland. I also ask you very, very much, to send me your drawings and alcohol preparations of the plant. I can use everything, and you know yourself, the more one sees and examines, the more correct and understandable are the statements. Very desirable would be numerous, ripe seeds, inorder to grow the plant here if possible, and to observe it living with relatives in its developmental stages. I would consider it best, if you would send the items through the Smithonian Soc. There is no hurry.

Parry 's Nuphar pictum (prictum ? E.D.) is really a good species and quite strange. You give me the information from his " Notis". Have these been printed ? Probably not ? If they should be printed sometime, I ask to have the printing sent to me. I also ask you very much, to arrange, that I may see the plant (Nuphar prictum) if you can possibly do so. This plant is the same, of which you wrote me several

times, that Parry had found it in the Rocky Mountains, though he had not described it, and, of which you sent me at one time a piece of sepalum, which I doubted as coming from a Nuphar, as it did not show any stem-hair at all on the inside? I am anxious to see, if it really has no stem hair. In a well known place I wrote: " With Nuphar advena the color variety with carmin-red petals and tips of the lomanties is more common, than the entirely yellow colored ones. " You ask, where this news comes from ? You saw them always only yellow and all florists the same way (Elliott, Gray, Beck, Torrey). I do not have at hand Elliott and Beck. Torrey (Fl. of New York 1843 I 40) does not give any information about the color of petals and ...., neither does Torrey and Gray (Fl. North Americ. I 57). In my excerpts from Asa Gray's Manual I have unfortunately nothing about color indication. However Aiton (Bot. Mag. XVII 684) illustrates the flower with stem, who'se joints (? E.D.) and rims of anthers are red, (Reichert Fl.exot. I t.12 notes this also) - but in the description he mentions nothing of red. The only other existing colored illustration of ~~Nymphaea~~ Nuphar advena (Wittv. hort. berol. t XXXVIII) has the stem yellow (Petals not to be seen). Aiton (hort.Ravens. 1789 II 226) calls the petals rubro-flaviscantia and the filaments flava, but medio rubra ? Umberg (could be Amberg, E.D.) (Cat. R. Am.sept. 1813 S 2) calls ~~Nymphaea~~ Nuphar advena "striped-flowered" and Nuphar luteum (the species name shown in the original is "leum", E.D.) "yellow-flowered". The "striped-flowered" refers assumedly to the red stripes, which show the rims of the anthers. Further, I have not seen a flower of a living Nuphar advena.- I examined the numerous and from different years from the hort.lipsiensis (Leipzig Botanical Garden, E.D.) , where they prosper beautifully in the open, which did not show on the inner axis of the petals (most of them) a 1 large or 2 nice red spots, the majority I saw had red rims. On the numerous dried material I could of course not discover any color.

Authors, who probably describe dried material, do not mention the color of the various parts, or, their descriptions are generally too short. When certain writers e.g. Darlington (Fl.Austria), Aiton name the petals "yellow", I interpreted this, that they give the color incomplete, because I saw them in fresh state only yellow. Nothing is more common than incomplete designation of colors. Thus the petals of Nymphaea stellata ( ) are always described as blue. They are never blue, exactly speaking, because their base is always whitish or yellowish. It is thus easily explained, that I expressed myself about the color of the petals and stamens of Nuphar advena as I did. It is the more interesting to hear from you - and you are the first credible man, who has examined the problem completely, as I believe - that you have seen red-spotted petals (also stamens ?). I want to ask you very much, to take this point in as many localities as possible into view and examine, and to give me information about it. But still one more large request !

You probably have also Nymphaea odorata Ait in numbers. I did examine Nymphaea odorata alive and posess material in alcohol, and received now seeds from Ida Agassiz, which germinate beautifully, but I can not determine varieties from the plants. What others assign as variety characters : Smallness (var.minor) is not justified to form a variety. Small plants become always quite large ones in rich soil according to my experience, though not the largest. As criterion for varieties are to be considered 1) morphological conditions, such as the form of fruit especially, of the leaf, etc. 2) physiological characteristics as: size of degree of opening, color and such. I permit myself to ask you strongly, to look in your area, if you can not find real differences in the form of fruit, the form of the leaf for the determination of varieties of Nymphaea odorata .

By analogy with Nymphaea alba - I assume you own my dissertation (Appendix hort.bot. berol 1854) ("berol" = of Berlin,E.D.) - .... otherwise very probable. I urgently ask,to do the same for Nuphar advena, and I hope to mail to you before Spring a list of points,which must be considered for this plant. You would advance the cause very much through such studies.

I want to include in my wotk a historical portion,which gives the biography of the collectors, who often dared their lives and were in danger. For this reason I urgently ask you to provide me with a sketch of your own and of Parry. I need time and locality of birth,main history of life,and, if possible, the presentation of the educational process in short strokes, as given in a sensibly arranged curriculum vitae in a promotional dissertation.

Best greetings to your wife and Georg. We are quite well here. My wife is under much stress, because the youngest childe, Johannes, born Nov. 19,1863, sleeps during most nights very little, often not at all. Nevertheless, he is during daytime very alert & alive and crawls around our home,but talks only a few words. The older girl, Mathilde, born March 20, 1861, gives us much joy, as she is a very capable child with an extraordinary memory,and memorizes for declamation entire books of poems. She knows already very many plants; all in Dreco's picture books. We plan to have our picture taken in Summer,then you shall get also a photograph of us all. - The ministry appropriated more than 4,000 Thaler for the construction of a magnificent - the largest of all - Winter-plant house in the local botanical garden. The construction was begun last year,but, unfortunately, not completed,and I fear, it will be too late this year, to get it finished,to grow already this year successfully Nymphaeaceae. But I have otherwise several basins in the houses and in the open,also a pond; In it I have also Nuphar

advena , growm from seeds from Leipzig. But of 12 plants only one remains, and apparently the Summer here is too cold. It flowered only 2 - 3 times. Of foreign Nymphaeaceae I have a large,living collection, also the Swedish carmin-red one,ehich is deeply red as Nymphaea rubra Preb. ; it is like N .alba, but I must determine the variety through further observations. I received 5 plants in the Fall of 1863. On top of this, I have all houses full with Nymphaeaceae,mostly in large vessels . I study them in all directions,to determine the species. The tasks costs much, very much time and maximal attention. To complete the work, I will certainly wait until the crosses of Nymphaea alba flower, which are now only 2 years old. Brasenia peltata I also have many, which nobody else has in Europe, but I cannot get them to flower. Would you not have the op= portunity to give me the address of somebody, who could collect Cabomba carstiniana in alcohol or send seeds in moistened charcoal, so that I could grow the plant here.! I know very little of Cabomba, despite seing,what there is in Europe. Now, again heartiest thanks for your supreme gift. Do not scold about my numerous requests.

(There is no signature ! E.D.)

Translated from German script by Edgar Denison, August 1988)

Rec^d March 14th 1863
Ans July 30. 1865

Königsberg i. Pr.
17/2/63

Lieber Freund!

[illegible] 6. Septbr 1860 u. 8 Nov. 1860 [illegible] E. Meyer [illegible]

[illegible] 4000 Thl. [illegible] 1862 [illegible]

die Nelumbium-frage noch gründlicher zu behan-
deln Material für diesen konnte ich Ihnen dann mit-
der senden. Aber diesen Sommer kann ich doch [illegible]
[illegible]
[illegible]
[illegible]
aber ich will die Gelegenheit benutzen, [illegible]
[illegible]
[illegible] Roetter [illegible]
[illegible]
[illegible] 20 – 30 [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] specimen, [illegible]
[illegible]
[illegible]
[illegible]

[illegible] Nymphaea mexicana A. Gray von Wright in New
Mexico gesammelt u. in Gray Plant. Wrightian. [illegible]
[illegible] Nymph.
stellata W. [illegible]
[illegible] Nymphaeaceen
[illegible] N. elegans [illegible]
[illegible]
[illegible]
[illegible]
[illegible] herb. Hook. [illegible]
[illegible] Nymph.
stellata W. [illegible]
[illegible]
[illegible]
Nymph. elegans Hook. [illegible] herb. Hook. [illegible]
[illegible] Wright in New Mexico [illegible]

habe Sie [illegible] Samen der Pflanze [illegible] [illegible] beschaffen?

Wenn Sie Exemplare von Nuphar luteum [illegible] intermedium Ledeb. und Nordamerika[illegible] [illegible] von Torrey und Nuttall [illegible] Lindley geschickt in dessen Herbarium [illegible] [illegible] Nuphar [illegible] Nuphar luteum [illegible] (Manual 1851?) [illegible] [illegible]

[illegible] Vaccinia of the Boundary [illegible]

[illegible] Halle [illegible]

[illegible] 8 Monate [illegible] 4 Monate [illegible] 1 Monat [illegible]

[illegible]

— [illegible] am 30. Mai 1861 [illegible]

Mathilde [illegible]

[illegible] Nymphaeaceen [illegible]

[illegible]

R. Caspary

Rec^d March 7th

Königsberg in Pr.
10. Februar 1866

Lieber Freund!

Ihren Brief vom 6. Januar 66 habe ich seiner Zeit erhalten [illegible] den meinigen vom 22. November 1865 mit den Juncus-arten, die Sie aus Meyers herb. genannt [illegible] zu kennen wünschten. Ich schreibe Ihnen damit, daß mir Nymphaea odorata mit zottiger Behaarung der Blattstiele, eben so unbekannt [illegible] ist. [illegible] Ich habe [illegible] für Miquels Ann. Lugd. Bat. N. odorata nach dem herb. Lugd. Bat. beschrieben und bei der Gelegenheit alle meine Aufzeichnungen durchgesehen und finde, daß ich am 10/4/1856 im berlin. botan. Garten an den dortigen lebenden Pflanzen [illegible] habe, sie zeigen [illegible] N. versicolor, discolor, pygmaea, aber alles ist N. odorata, mehr oder weniger unten auf dem Blatt [illegible] mit 2–10 zottigen [illegible] Haaren besetzt. [illegible] herb. J. Gay [illegible] Blätter mit [illegible] Stiel und unter den Pflanzen der Nymph. odorata, die ich aus den meisten [illegible] Herbarien [illegible] (I h. Lugd. Bat. Ch. Wright. Texas — h. Sonder. Schlottmann. Texas — h. meum. Louisiana. Ded. A. Gray. etc). [illegible] zottigen [illegible] Anlage [illegible] Blattstiel von N. odorata, [illegible] Ich habe nun in Miquels Ann. Lugd. Batav. 2 Formen unterschieden: N. odorata I glabra, petiolo folii adulti glabro und II villosa, petiolo folii adulti plus minus in parte superiori villoso. [illegible]

(bis zum Vorspringen der [illegible]

geneigten, dünnen Abtheilung) geht die letzten

Formen in die ersten über. In Willdenow's Herbar

ist ein [illegible] Blätter, die [illegible] oben

[illegible] auf dem [illegible] zeigen. Die [illegible] von

Algen auf denen [illegible]. Man machte

zur Prüfung einige Schnitte der [illegible]

der Blätter, [illegible] mit Jod (Lösung in Jod-

kalium u. Wasser) u. [illegible]

[illegible]

[illegible]

[illegible] Algen,

[illegible]

[illegible] Algen u.

[illegible]

[illegible]

[illegible]

[illegible]. Das Blatt der von Schlottmann in

Texas gesammelten ist 6 1/2" [illegible]

u. die [illegible] der [illegible] Louisiana

4" 3 1/2''' im Durchmesser, u. [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] 7–12 [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] Formen

der Pflanze, die ich vor mir sehe in meinem Material nicht sehr [illegible] bedeutend. Aber trotz dem Umfange [illegible] [illegible] ich [illegible] meinem [illegible], daß [illegible] [illegible] [illegible] nicht [illegible] Untersuchungen über die Varietäten ~~[illegible]~~ der M[illegible] [illegible]. Das [illegible] Material, [illegible] [illegible] Blätter und [illegible] [illegible] von [illegible], ~~[illegible]~~ ~~[illegible] [illegible] [illegible]~~ ist ganz unzulänglich [illegible] die Spiel- und Unterarten zu [illegible]. Die bis jetzt aufgestellten [illegible] ich ebenfalls für ~~[illegible] [illegible]~~ ~~[illegible]~~ ~~[illegible]~~ unzulänglich oder unbegründet.

Spielarten sind begründet: 1) auf die Farbe. Pursh (Fl. Amer. sept. 1814 II 368) stellt eine Spielart auf β rosea. foliis cordatis integerrimis, obtusis; lobis divaricatis, acutis, petiolis pedunculis foliisque subtus purpureis; calycibus petalisque extus roseis. — „The variety β is probably a distinct species, which only further observation can decide!" Unter die Gestalt der Blätter, die Pursh [illegible] auch [illegible], als Charakter der Spielart, [illegible]. [illegible] von der Farbe. ~~[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]~~ [illegible] [illegible] [illegible] Pursh's β rosea beständig? Nein! Pursh brachte seine Pflanze lebend nach England, und nennt sie ~~[illegible]~~ ~~Kew~~ kultiviert und war nicht mehr [illegible] — [illegible] [illegible], [illegible] Sims (Bot. Mag. Ho. t. 1652) [illegible]. Sims ~~[illegible]~~ [illegible] [illegible] von der Farbe als Charakter [illegible] zu [illegible] [illegible] [illegible]; [illegible] [illegible], [illegible], er nennt Pursh's Pflanze var. β minor. Was die Farbe der Blätter betrifft, so ist [illegible] [illegible] dem vorliegenden [illegible] Material [illegible] [illegible] [illegible] [illegible] [illegible] Pflanzen, [illegible] sie [illegible], [illegible] [illegible], [illegible] [illegible] ~~[illegible]~~ [illegible] [illegible], [illegible] nicht [illegible] [illegible] [illegible] ~~[illegible]~~ [illegible] [illegible] [illegible], daß man [illegible] auch die Farbe der Blätter [illegible] zu verschiedenen [illegible] [illegible] [illegible].

Spielarten [illegible] zu [illegible], [illegible] ~~[illegible]~~
[illegible] die Farbe [illegible] auffallend ist, können [illegible]
~~[illegible] [illegible]~~ [illegible] oder [illegible] – [illegible] – Spielart
[illegible] gemacht werden – [illegible] β. minor Sims [illegible]
~~[illegible]~~ [illegible] als Synonym von den [illegible]
[illegible]: N. odorata γ. minor Torr.
and Gray Fl. N. A. 1838–40. p. 57 und
N. odorata var. 2 minor 2 Torrey Fl.
New York, 1843. p. 38, obgleich [illegible]
[illegible] Sims, [illegible] Pflanze [illegible]
[illegible], [illegible], da γ. minor Torr. and
Gray und var 2. minor Torrey "flowers
rosecolored" ~~[illegible]~~ haben. [illegible] N.
odorata 2. rubella Rafinesque ~~"[illegible]~~
Med. Fl. 1830 II 45 "tinged with
rose" [illegible] auf die Farbe [illegible]
[illegible] Spielart, [illegible]
3. chlorhiza "with yellow roots" i. e. rhi-
zomes, which in normal plants accor-
ding to Rafinesque are "blackish"! Nym-
phaea [illegible]
[illegible], [illegible] ~~[illegible]~~,
[illegible] Spielart [illegible], [illegible]
[illegible],
[illegible] Rhizoms [illegible]
[illegible]

Oder 2) die Größe der ganzen Pflanze, der
Blätter und Blüthen als Spielart kennzeichnen be-
trifft, ~~[illegible]~~ [illegible] Sims in seiner β. minor
u. Rafinesque (l. c.) in seiner parviflora
[illegible], [illegible]
[illegible], [illegible] die [illegible].
Nymphaeaceen-[illegible], [illegible] die Größe,
[illegible] und [illegible] seiner Pflanzen

dann Blüthen u Blätter ganz von den Wachsthums-
verhältnissen abhängen, welche denen der Steine gleich. Will
man kleine Pflanzen haben, die kleine Blätter u kleine
Blüthen haben u meist spärlich blühen, so setze man
Sämlinge in kleine Töpfe u schlechte Erde; selbst gute
Erde muss sie jedoch auch wenig geben. Will ich grö-
ssere u kräftige Pflanzen haben, so setze ich sie in gute
oder beste Erde u ~~[illegible] [illegible]~~ verhältnissmässig oder große
Töpfe. Will ich aussergewöhnlich große, sehr große kräfti-
ge Pflanzen haben, so brauche ich nur Sämlinge aus
[illegible] [illegible], welche die ~~zu~~ kleinen Pflanzen von
den kleinen Töpfen [illegible], in [illegible] [illegible]
sehr große Kübel den besten Erde u viel Dünger zu
geben. Sämlinge, die von selbst von verschiedenen
Stämmen ~~aus~~ in großen Kübeln auf guter Erde aufge-
kommene Pflanzen erlangen nun allen die natürliche
Größe, als welche die gewöhnlichen Verhältnissen entspre-
chen. Wie ist der Unterschied groß, so in der
freien Natur. Schlechter Boden ~~[illegible] [illegible]~~, wenig
Nahrung, macht kleine Pflanzen u da der Boden in
jungen Landstrichen ~~[illegible]~~ oft gleich ist, hat man
~~[illegible]~~ sie lange [illegible] bleibt, oft in ganzen ~~[illegible]~~
Gegenden kleine Pflanzen. Aber bleiben die so, wenn
man sie in besseren Verhältnisse, setzt [illegible], gute
Erde bringt? Auch nicht. Ich habe gesehen, dass
[illegible] Pflanzen von Nymphaea alba u Nuphar
lutea — ~~[illegible]~~ v. Leonhardi schickt mir einmal
sehr wenige [illegible] [illegible] Töpfen, die er
für Nuphar pumilum hielt — in guter Erde
gepflanzt, ~~[illegible]~~ groß u kräftig wurden ~~[illegible]~~
~~[illegible]~~ so [illegible] gross u man hatte
die alte var. minor u maxima auf [illegible]
Stelle, da [illegible], [illegible] man gar keine Nani-
etas hatte. Wenn jedes bemerkt würde, dass eine
planta nana, ~~[illegible]~~ oder minor auch in besseren Ver-
hältnissen versetzten [illegible] bleibt, oder gar [illegible]
[illegible] wäre, dann hat man [illegible] var. minor [illegible]
aber ~~[illegible]~~ [illegible] ~~[illegible]~~ ~~[illegible]~~ Nymph.
odorata var. minor Sims ist ~~nicht~~ zu [illegible].

zur Begründung von Spielarten

6. Außer als Farbe u. besonders Größe fand ich morpho-
logische Verschiedenheiten, des Blatts, der Gestalt der
Blattlappen, ob lang oder kurz, der Sinus(?), ob sie
breite oder schmale Öffnungen haben, der gezähnten(?),
[illegible] Nerven(?), der Dicke der Kronblätter(?),
ihr Verhältniss der Länge zur Breite, ob sie mehr (?)
geschweift oder gespitzt sind, die Gestalt der Drüse(?),
ob kuglig, eiförmig, glatt gedrückt, die Größe
~~der Samen~~ die Gestalt der Narbe(?), deren Länge
im Verhältniss zum Blatt ~~[illegible]~~, die Beschaffen-
heit des Pollens, ob warzig, oder stachlig. Ich habe
nur diejenigen morphologischen Punkte aufgeführt, die
bei Nymphaea alba, welche ich fast mit allen [illegible]
hervorgehoben lebend oder in Alkohol untersucht habe zu ihren
Varietäten ich gesammelt [illegible] in Russland(?)
seit etwa 12 Jahren gemacht habe, die wichtig für
die Aufstellung von Spielarten sich ergaben, oder besser
gesagt, wonach sich Spielarten [illegible] zeigen,
denn wir haben sie nicht aufzustellen, sondern
sie in der Natur durch Beobachtung herauszufinden
oder es sind ganz Punkte nur solche, die zur Unter-
scheidung von Nymph. alba u. odorata wichtig sind.
~~[illegible] von Nymph. odorata~~ Wenn ich oben
angab, daß die Größe der Blüthen u. Blätter nicht, so
[illegible] ich mich, Spielarten begründet, zu ich [illegible]
beide beiden Hauptspielarten der Nymphaea alba
I polystigma (ehemals melocarpa Casp.) u.
II oligostigma (ehemals oocarpa Casp. — ich
musste diese Namen aufgeben, weil von oocarpa
sich auch eine Unterspielart mit abgeplatteten
Früchten bei Petersburg in Russland u. bei [illegible]
Brenson(?) fand —) die Größe der Samen eine
sehr beständige Unterschied. I polystigma mit
zahlreichen Kronblättern(?), hat kleine Samen u. II oli-
gostigma, mit wenigen Kronblättern, sehr große. Dies
lässt sich in seltenen Fällen nur [illegible]
nehmen. Und die Größe des Pollens variirt

auch die gänzlich [illegible] bei Nymphaea tetragona Georgi 1775 (= N. pygmaea Ait. 1811).

Wird nun von [illegible] Nymph. odorata ihre [illegible] Spielarten unterschieden [illegible]? [illegible]! [illegible] Pursh charakterisirt seine var. rosea nicht allein nach der Farbe, sondern auch nach der Blattgestalt. Bei Nymph. odorata 1. heißt es: N. foliis orbiculato-cordatis, integerrimis, lobis divaricatis, acumine obtuso, bei var. β. rosea: foliis cordatis, obtusis, lobis divaricatis, acutis. Diese Unterschiede [illegible] zu [illegible] nach Analogie von Nymph. alba, [illegible] Unterschied [illegible] Blatt auf [illegible] [illegible] Material der N. odorata. [illegible] Hauptform u. var. β sollen nach Pursh Blätter lobis divaricatis haben [illegible] Lappen [illegible] var. β. Bei der Hauptform soll das Blatt integerrimum sein, bei var. β obtusum, [illegible] var. β emarginatum [illegible] der Hauptform [illegible] apice subacuminatum, [illegible] L. Sims t. 1652 [illegible] var. β [illegible] Lappen bei 1 [illegible]: acumen obtusum, bei var. β. [illegible] acuti sein; [illegible] (1 u. var. β) [illegible] lobis [illegible] minus acuminatis [illegible] (auch [illegible] Hauptform, [illegible] Sims Bot. Mag. t. 819 [illegible] (subobliquato) [illegible] acumine obtuso. [illegible] Unterschied von 1. foliis orbiculato-cordatis u. var. β. f. cordatis [illegible] [illegible] Ganzen [illegible] Unterschied. Torrey u. Gray l. c. [illegible] Spielarten [illegible] & sinus and lobes.

Of the leaf more or less acute; β sinus and lobes more or less rounded?. [illegible] Nymphaea reniformis Walter Car. p. 155 [illegible] De Candolle [illegible] Deless. Icon. II t. 5 [illegible] Nym. reniformis De Candolle [illegible] Nelumbium reniforme W. sp. II 1260 [illegible] Willdenow [illegible] Nelumb. reniforme [illegible] Walter's [illegible] Willd. [illegible] Walter's Nymphaea reniformis [illegible] Nelumbium [illegible] Walter [illegible]: „loculis monospermis" [illegible] Nelumbium [illegible] De Candolle [illegible] Nymphaea reniformis DC [illegible] Nymph. reniformis Walter [illegible] De Candolle's Nym. reniformis in Deless. Icon. [illegible] Torrey u. Gray [illegible] Delessert in Paris [illegible] Planchon (Ann. sc. nat. 3 Ser. XIX. 1853. p. 52) [illegible] 1856 [illegible] Lasègue [illegible] Nymphaeaceen [illegible] Deless. [illegible] Nymph. reniformis Del. [illegible] De Candolle's [illegible]

Angenommen aber, daß wirklich ein solches Blatt (9)
einmal vorkäme, so wäre es als eine Monstrosität
zu betrachten und die Keim [illegible] [illegible] [illegible]
der Keim und gewiß einmal [illegible] [illegible], die ein
solches Blatt trägt, auch normale Blätter hervor-
bringen. In vielen Blättern, wie ich die Sinus
stark gewunden sehe, war doch eine [illegible]
die nicht der Natur, sondern der [illegible] dieser
[illegible] [illegible], [illegible] [illegible] [illegible] [illegible]
[illegible] war, ob aber [illegible] bei gewissen
Pflanzen? Das mögen die amerikanischen Botaniker
an Ort und Stelle entscheiden.

Die amerikanischen Botaniker mögen auch durch
Beobachtung an Ort und Stelle ermitteln, was für
Spielarten, durch [illegible] [illegible] [illegible]
unterscheiden, von Nymph. odorata vor-
kommen; auch möchte ich ihnen empfehlen, ob die Ab-
[illegible] ganz I glabra und II villosa zu großen,
die nicht einen Unterschied begründen sind, [illegible] nicht
oft vorkommen. Ich erlaube mir Ihnen für die [illegible]
[illegible] der Spielarten noch einige Gesichtspunkte
zu stellen und zwar nach der Analogie unter
Arten der [illegible] Castalia DC., die mir [illegible]
[illegible] [illegible] Nymph. alba L. und tetragona
Georgi. Von beiden kommen 2 [illegible] [illegible]
Hauptformen vor, von N. alba I polygona
[illegible] und [illegible] mit [illegible]
mit langen, [illegible] Kelchblättern,
Blumen und Kronblättern, [illegible] [illegible], [illegible]
[illegible] Narben, gelben, [illegible] [illegible]
[illegible] und [illegible] Staubgefäßen und II [illegible]
[illegible], [illegible] [illegible]
[illegible] [illegible] und nach der [illegible] [illegible] [illegible]
mit breiten, kurzen Kelchblättern, Blumen- und
Kronblättern, [illegible] [illegible], großen Narben, [illegible]
[illegible] [illegible] [illegible] [illegible] und [illegible]
Staubgefäßen. Diese beiden Hauptformen der

Nymph. alba haben ~~[illegible]~~ zahlreiche Unter-
spielarten, unterschieden hauptsächlich durch die
Frucht, sphaerocarpa (kugelfrüchtig), depressa
(~~[illegible]~~ mit glatter Frucht), urceolata (mit sehr
kurzer schnabelartiger Spitze) u. s. w. Nym-
phaea tetragona Georgi zerfällt in 2 Hauptformen
I lata mit sehr breiten ~~[illegible]~~, gekerbt-
und gezähnten Kelchblättern, breiten, kurzen
Laubblättern, im Norden u. Osten des Gebiets, [illegible]
ganz der Nymph. alba oligostigma entsprechend;
[illegible] ~~[illegible]~~ Ostsibirien, [illegible] u. der Mand-
schurei
u. II angusta mit ~~[illegible]~~ [illegible], gekerbt und
gezähnten Kelchblättern u. langen, schmalen
Laub- u. Blumenblättern, im Süden (Khasia-Moun-
tains in Silhet) u. Südosten des Gebiets (China,
Japan). Es ist nun zuzugeben, [illegible] nicht nur
[illegible] geographisch abgegrenzte
Spielarten, [illegible] völlig
[illegible]
~~[illegible]~~. [illegible] der Nymph. alba u. tetragona ent-
sprechend, [illegible] N. odorata ~~[illegible]~~ [illegible]
[illegible] Nymphaea Lotus [illegible]
[illegible] geographischen Varietäten, [illegible]
[illegible]
zu [illegible].
[illegible] N. odorata [illegible]
Borsig's Garten in Berlin [illegible]
[illegible] Eaton [illegible]
[illegible]
[illegible]
[illegible]
~~[illegible]~~ [illegible]
[illegible].
[illegible] Nymphaea alba [illegible] ~~[illegible]~~ (~~Nuttall~~ Nuttall,
~~Michaux~~ Nuttall (Gener. N. A. plants 1818 II p. 73)
— „[illegible] Detroit" —, Michaux (Fl. b. am. I

310) — „a Canada ad Carolinam" — (in h. Michaux [illegible] in h. Mus. Par. [illegible] N. odorata aus Canada von Michaux als N. alba bezeichnet) — als in Nordamerika vorkommend angegeben wird, obgleich diese nur [illegible] ~~[illegible] Paynes N. tuberosa [illegible] zu haben spuria~~, zu [illegible] ich [illegible] Übereinstimmung mit N. tuberosa Paine zu [illegible], so aber doch nicht [illegible] möglich wäre, so namentlich in Nordamerika Nymphaea alba vorkommen, so [illegible] die Unterschiede zwischen den Pflanzen ~~[illegible]~~ der N. alba u. odorata [illegible] so weit sie mir bekannt sind.

Nymphaea alba L.	Nymphaea odorata Ait.
1) Grana pollinis aculeata vel grosse tuberculata, operculo laevi vel sublaevi.	1) Grana pollinis ubique aculeata.
2) Processus carpellorum carnosi, triangulari-ovati vel oblongo-triangulari-ovati, interne plerumque subconcavi, 1–5 sulcati.	2) Processus carpellorum carnosi oblongo-triangulares vel lanceolati, sublineares, interne canaliculati.
3) Stipulae oblongo-ovatae, elongato-triangulares, anguste emarginatae, obtuse bicarinatae (circiter ad 3 3/4''' longae), punctum vegetationis rhizomatis longe superantes cum petiolo putredine proxime ad punctum vegetationis rhizomatis destruitae.	3) Stipulae subreniformes, late emarginatae vel ovato-reniformes, obtusiusculae, oblique utrinque decurrentes, obsolete bicarinatae (circiter ad 9''' longae), inferiores longe sub puncto vegetationis rhizomatis relictae, petiolo superstites (communes), punctum vegetationis rhizomatis vix superantes.
4) Pulvinaria foliorum in rhizomate valde prominentia.	4) Pulvinaria foliorum in rhizomate vix prominentia.
5) Folia in rhizomate densissime posita, internodia brevissima, vix 1''' longa.	5) Folia in rhizomate rariores, internodiis longioribus 1 1/2''' circiter longa.

N. alba	N. odorata
6.) Rhizoma crassius, usque ad 4 1/4"	6.) Rhizoma tenuius, usque ad 1 1/2''' crassum.

Bei beiden sind die Narben der Blattstiele [illegible] rund) dagegen bei Nymph. tuberosa ~~Hayne~~ Paine (Report of the Regents of the University of the State of New-York 1865 Sonderabdruck p. 132) sind die ~~[illegible]~~ Blattnarben auf den Knollen, die ich [illegible] ~~[illegible]~~ [illegible] [illegible] [illegible] [illegible] ~~[illegible]~~ transverse-lanceolatae (sc. cicatrices) ancipites [illegible] [illegible] [illegible] [illegible] [illegible] die [illegible] [illegible] von Nuphar. Das Rhizom von Nymphaea alba ist bisher [illegible] [illegible] dargestellt. Hayne (Arznei-Gewächse IV t.35) bildet [illegible] [illegible] von Nuphar luteum statt dessen von Nymphaea alba ab [illegible], ebenso Reichenbach (Icon. Fl. germ. VII t.70, nach Copie von Hayne) u. Dietrich (Fl. boruss. 11 t.765).

Die [illegible] [illegible] Abbildung der Stipulae von Nym. alba u. odorata. Die [illegible] bei [illegible] [illegible] bei Nym. alba [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] N. odorata sind [illegible] [illegible] [illegible], [illegible] [illegible] [illegible] [illegible], die ~~[illegible]~~ des Rhizoms, die [illegible] [illegible] Eaton [illegible] N. Am. [illegible], sind [illegible] [illegible], [illegible] [illegible] [illegible] [illegible], [illegible] ~~[illegible]~~ [illegible]. ~~[illegible]~~ [illegible] [illegible] [illegible] [illegible] [illegible] von N. odorata [illegible] [illegible] [illegible] [illegible].

Paine giebt von seiner N. tuberosa an: „connectivo staminum exteriorum supra antheram in cuspidem elongato". Die [illegible] [illegible], [illegible] die [illegible] [illegible] bei N. odorata bei St. Louis [illegible] u. [illegible] [illegible] [illegible] ~~[illegible]~~ ~~[illegible]~~ N. odorata aller Standorte, von [illegible] [illegible] [illegible], von Canada bis Florida, Texas u. Luisiana [illegible]. Die [illegible] u. mittleren [illegible] aller [illegible] [illegible] antheras appendiculatas, wie die [illegible]

ist; der Appendix hat latitud.: longitud. = 1:1/4-1 1/2.
Ich habe leider von Paine N. tuberosa ~~Knospe Knolle~~
Knospen noch nicht gesehen. Es ist nöthig, daß das
Verhältniß der Breite zur Länge des Kelchblattes auch
für N. tuberosa angegeben wird.

Die Haare mit denen die Spitze der Knollen
von N. tuberosa Paine bedeckt ist,
sind sehr auffallend. Sie sind theils
wie die anderer Nymphaeaceen, mit
sehr vielen Zellen, sind meist länger,
4 bis 11 u. mehr (:a), u. andere mit dicken
Haaren: b, deren Grund umfassen bis
3 Zellen in der Breite zeigt. Solche
Haare sind mir bei den Nymphaeace-
en sonst nicht bekannt.

Es giebt noch einige Namen von
amerikanischen Nymphaea-Arten, die
wenig oder gar nicht bekannt sind und
entweder zur N. odorata [added: zu rechnen sind] ~~gehören~~, oder
~~und~~ zu ihr u. N. tuberosa wahrscheinlich
gehören dürften. Es sind diese Nymph.
nitida Sims (Bot. Mag. XXXIII t. 1359),
N. rosea Rafinesque (Med. Fl. 1830.
II 45), N. maculata Rafin. (l. c.)
N. spiralis Raf. (l. c.), N. par-
keriana Lehmann (in Otto Hamburger
Gart.- u. Blumenzeitg 1850. IX p 529)

Nymph. parkeriana Lehm., von einem gewissen
Mr. Parker in Guiana gesammelt, — Originale sah ich
im h. Hooker u. in h. Lehmann, ~~die sehr in einem~~
Nymphaeaceen ich auf Lehmann's Zeit untersuchte — ist
nichts anderes, als eine kleine Form von Nym. odorata,
deren Blattstiele oben zum Theil roth sind, obgleich sehr
wenig behaart sind.

Obgleich Nymphaea nitida Sims abgebildet ist, u. in
England auch kultivirt wurde, herrscht doch nun zu Dunkel
über diese Pflanze, weil kein Original zu erlangen ist.
Ich habe [added: in mehreren] herb. Hook., herb. Mus. Britt., h. Linn. Soc.
London u. sonst in keinem Herbarium ein Original gesehen.

Im h. Bernhardi, der Dir erkaufen, wenn ich nicht
irre, ~~[illegible]~~
eine Blüthe u. 1 Blatt ohne Zweifel von kultivirter
kleiner N. odorata, welche als N. pygmaea bestimmt,
durch eine Lieraktur mit Etikette als N. nitida be-
zeichnet. Im botan. Garten zu Genf fand ich einen
kleinen Stamm von Nymph. odorata (als N. nitida) der im Topf kultivirt
war, Blätter u. dessen Stiel ich sah, welche genau unten fast
war — jedenfalls durch sehr alten Stock, gegen den Rand etwas
bräunlich waren. Sims giebt ~~[illegible]~~ 3 Charaktere
als seiner N. nitida eigenthümlich an: 1) the rootstock
is perpendicular and does not seem ever to acquire
any considerable length. Die Abbildung des Rhizoms
muss sehr mangelhaft, unterscheidet sich aber nicht von
einer kümmerlichen, im Topf gezogenen N. odorata,
nach dem eine gezeichnete worden sein. Das Rhizom
ist bloss 2 1/2" lang u. 1" u. jedenfalls einer ~~[illegible]~~ nur wenige
Jahre alten Pflanze angehörig. Es ließe sich von ihm ~~[illegible]~~
~~[illegible]~~ die Eigenschaft, dass die Rhizome perpendikulär
sei, gar nicht entnehmen, denn die Rhizome jüngerer
Pflanzen bewahren u. sehr lockeren Grund, z. B. diejenigen
kleiner (gewachsener) sind bei der erwähnten N. alba in der Jugend
stets ... 1 1/2' lang sind, wenige mindestens 10 Jahre
gezogen werden, sehr häufig ganz senkrecht u. legen sich
erst später wagerecht. Um die Angabe über das senk-
rechte Rhizom zu begründen, hätte Sims die Pflanze ein paar Jahre
nicht im Topf unter ~~[illegible]~~ zu kargen Bedingungen ziehen
müssen. 2) „Venis (folii) utrinque exaratis". Diese
Willdenow (Hort. Berol. No XXXIX) von N. odorata, die
er in Berlin kultivirt sah, sagt = venis ~~[illegible]~~ impressis.
erwähnt Sims (Bot. Mag. t. 1652 mit [illegible]) dass Willdenow
nicht N. odorata, sondern N. nitida ~~[illegible]~~ vor sich gehabt
habe, während N. odorata von Aiton (Hort. Kew. ed. 2. III 292)
Bigelow (Am. med. bot. III 137), Torrey (Fl. New York 38)
„prominent veins" zugeschrieben werden. Schon früher
bemerkte ich, dass ~~die~~ die Nerven der Blätter (von N. odorata) früher
~~[illegible]~~ erhaben, bald kanalisirt sind. Ich fand sie bei ~~[illegible]~~
N. odorata im Topf im Berliner botan. Garten, dagegen unter
auch über der Blattfläche erhaben oder kaum eingesenkt im
frischen Zustand. Nach Analogie anderer Arten waren
~~[illegible]~~ die Nerven bald erhaben bald eingesenkt im
frischen Zustand sein u. damit fällt dieses Merkmal
fort: Ich führe als Beispiel zu diesen Gegenständen

Nymphaea blanda Meyer u. die [illegible]
[illegible] Blüthe ~~[illegible]~~, ich [illegible]
Sommer etwa 10 u. Zoll, [illegible]
[illegible], Angaben die [illegible] ~~[illegible]~~
~~[illegible]~~ Pflanzen, die ~~[illegible]~~ in den [illegible]
[illegible]
Pflanzen mit zum Theil weißen Blüthen [illegible],
[illegible] Pflanze [illegible]
[illegible]
3) Sims [illegible]: „N. nitida seems to require the
constant heat of a stove or hot-bed ~~to~~ to pre-
serve it alive, whilst odorata is now found to
be quite hardy." Aus dem Wort „seems" [illegible]
[illegible]
[illegible]
Sims [illegible] N. nitida [illegible]
N. odorata [illegible]. Die Abbildung allein zeigt
[illegible] N. odorata [illegible]
[illegible] Sims [illegible]
[illegible]
N. odorata [illegible]
[illegible] Sims [illegible] N. nitida
[illegible]. Don
giebt an: „Native of Siberia in lakes and in
the river Lena and in Dauria in still water" (General
Syst. I 1831. p. 126). [illegible]
[illegible] tetragona Georgi, [illegible]
[illegible] Sibirien [illegible].
[illegible]
[illegible]
[illegible] Originale [illegible]?
[illegible]
[illegible]:

1. Nymphaea rosea. Leaves orbicular, split
at the base, lobes divaricate, acute, lower surface
red, petals rose coloured. In New York, Ohio
etc with smaller flowers, less odorous.

2. Nymphaea maculata. Leaves orbicu-
late, subundulate, dentate, base cordate
lobes obtuse, a brown central spot on the
leaves, petals white. In Canada and New
York near Lake Ontario. Flowers nearly inodor-

rose, smaller, with many narrow oblong obtuse petals.

2 Nymphaea spiralis Raf. (N. alba Mx. and N. odorata Ell.). Leaves orbicular, emarginate, base split, cordate, lobes divaricate, obtuse; petioles and scapes spiral, calix four-leaved, equal to the corolla. In the southern States. Flowers white, smell strong.

N. spiralis scheint wegen des Geruchs zu odorata, N. maculata u. vielleicht auch rosea wegen (fast) mangelnden Geruchs zu N. maculata, wegen des Fundorts: Lake Ontario zu N. tuberosa Paine zu gehören. — R

„Kurze Übersicht von allen mir bis jetzt bekannten Nuphar u. Nymphaea-Arten" [illegible] sehr interessant u. [illegible] Sie mir. Wollten Sie [illegible] ganz [illegible] in Bezug auf N. odorata [illegible] ist es nicht kurz. Aber Leute, die suchen wollten, müßten wissen, was sie suchen sollen. Ich möchte Sie bitten, falls Sie es für zweckmäßig halten, dasselbe [illegible] ins Englische zu übersetzen u. ihn drucken zu lassen, etwa in den Transactions of the St. Louis Academy, 100 Abdrücke auf meine Kosten zu machen u. davon an [illegible] Botaniker oder Sammler zu verschicken. Über Nelumbium, Nuphar spreche ich später ausführlicher. Ich bin jetzt gar zu sehr beschäftigt durch Miquel u. v. Martius. Aber noch eine letzte Bitte, die ich der Unterschrift hinzuzufügen bitte, nämlich die, daß man etwas zu ~~[illegible]~~ gesendet zu haben wünscht, was nicht [illegible] von N. odorata ist, oder unter anderen Nymphaeaceen, mir getrocknet u. [illegible] in Alkohol [illegible] nebst Rhizom u. Frucht. [illegible] an zu schicken. [illegible] ist gleichgültig. Kosten scheue ich nicht.

30 Thlr habe ich an Mettenius geschickt, [illegible] — Meine Photographie lege ich bei u. bitte mir eine [illegible] von Ihnen [illegible] habe ich. Ganz besonders bitte ich nochmals um Ihre [illegible]. Ich bitte [illegible] lange, bis ich sie habe. Beste Grüße an Ihre Frau u. Georg. Gott behüte Sie [illegible] u. in herzlicher Zuneigung Ihr

R. Caspary.

R. [illegible] Nymphaea [illegible] N. [illegible]

Rec.. March 7

Konigsberg in Prussia
Feb. 10,1866

Dear Friend !

Your letter of January 6, '66 I received in due time,and you did without doubt get mine of December 22,1865 with the Juncus species, which you desired to get aquainted with more accurate - ly from Meyer's herbarium.- I wrote you then, that Nymphaea odorata with shaggy hairyness of the leaf-stem, is unknown to me. That is incorrect. I recently described for Miquel's Ann. Ingr. Bot. the Nymphaea odorata according to the herb.Engr. Bot. and looked at that occasion through all my notes, and find, that I examined on April 10,1856 in the Berlin Botanical Garden on living specimens the hair at that time;they go under the names N.versicolor, discolor,pygmaea, but all is N.odorata,being more or less colored on the under side of the leaf vermilion (??? E.D.) and, more or less with from 2 - 10 celled,cylindrical hair upon the leaf-stem. I also saw in the same year in herb.J.Gay (could be Say, E.D.) leaves with long-haired stems, and from the specimens of the Nymphaea odorata ,which I have here from most of the europaean herbaria,I find several (h.Ingr.Bot - Ch. Wright & Tiens - h.sondexSchlottmann.Tra.. h. minor Louis;ann Ded. A.Gray,etc.) with partly highly shaggy stems -disposition for hair as round cells between long ones in every stem of Nymphaea odorata but mostly they develop little or hardly in fresh youth and disappear later. I examined now in Miquel's Ann.Engr.Bot. 2 forms of N. odorata I) glabra petiolo folio adulti glabro and II)villosa,petiolo folii plus minus in parte superiori villoso. Through lesser,thinner pubescense to disappearance of hair,the latter transcends into the first. In Wilderer's herb. & in h.Berlin. are leaves,which show on top hardly any hair on the stem. One must be on guard to not mistake algae for hair. As proof one makes several cuts of the epider-

mis of the leaf, treating them with iodine(solution of iodine-potassium with water)) and then with concentrated sulphuric acid. If real hair are present, their cuticulum remains connected with the epidermis, if there are deceptive algae, they will be destroyed, and only epidermis remains with round receptacles for hair. In dried state algae and hair can not be distinguished with certainty without this application. I find those shaggy leaf parts not only with small plants but also with large ones and those, which have finished flowering. The leaf collected by Schlottmann in Texas is 6½" long to the tip and the flowers of those of Mr. Morei (? E.D.) from Louisiana 4" 3½ '''' in diameter, and that in dried form ! The lower part of the leaf is deeply carmin, partially pale, totally pale along the rim, yellowish-green overall, possibly once in fresh condition light carmin along the rim. The ribs are very different for the two forms in dried state, their number 7 - 12 on either side, at times the primary, even the secondary and tertiary rise above the leaf surface and spread out much, - then the leaf was apparently pressed with very little pressure, which is shown also through other wrinkles and distortions - but they lie with the leaf surface in one plane, and are then in part not canaliculate in the middle, or, once in a while, canaliculate in the middle. The median rib is besides mostly somewhat raised, and this condition of the ribs extends to all forms of the plant, which I have in front of me, and my material is very impressive. But despite the volume and the effort, I urge you with the request, to continue to make thorough investigations about N. odorata varieties. The dried material, only pulled-off flowers and leaves, and only a few of each species, is entirely insufficient, to teach me about the species and subspecies. Those, which have been set up by now, I too consider not admissible and without foundation.

Varieties are based on I) Color. Pursch (Fl. Am.sept. 1824 II 368) created a variety β rosea; foliis cordatis integerrimis, obtusis divaricatis; acutis, petiolis pedunculis folioque subtus purpureis, calycibus petalioque . "The variety β is probably a distinct species, which only further observation can decide " About the shape of the leaf, which Pursch also mentions as character of the variety, later. Now only about the color. Was this in Pursch's β rosea constant ? No ! Pursch brought his plants himself to England, where they were cultivated, and were not any more rosy-colored white, as Sim's (could be Kim's, E.D.) (Bot. Mag. L. t. 1652) reports. He, thus, removes himself from the color as character, and takes a poorer one, the size, as his refuge, and calls Pursch's plant a var. β minor. As to the coloration of the leaf. based on the existing dried material and also the cultivated, young plants, it varies from light Keranistin (a red color ? E.D.) to a dense yellow-green, which does not even at the rim show a trace of Keranistin, which can be seen: Even the colore of the leaf is too variable a mark for basing varieties on it. At best, where the coloration is quite striking, a sub - or sub-sub-variety could be based on it. The β minor Sim's is being mentioned as synonym by the author himself: N. odorata γ smaller Thor. and Gray Fl. N.A. 1838 -40 p. 57 and N. odorata var ζ smaller Z.Torrey Fl.Newyork 1840 p. 38, though in contradiction with Sims; who'se plant is being described as white-flowering m, that γ smaller Thorey and Gray and var. ζ smaller Torrey have "flowers rosecolored". King (? E.D.) odorata 2 Rubella Rafinesquii Medic.Fl. 1830 II 40 "tinged with rose" is thus based only on color, an untenable variety, as also herewith 3. Chlorhiza "with yellow roots" i.e. rhizomas, which in normal plants are "blackish" according to Rafinesque ! Nymphaea alba has blackish and also

yellow rhizomes, which, however, does not indicate different varieties, but only different age and different earth compositions, which do not destroy or dissolve but blacken the rhizomes.

What 2) determines the size of the entire plant, the infloresscense, and leaves as a variety, which Sims uses in species β minor and Rafinesque (l.c.) in his λ parriflora, I consider this character even more variable (inconstant, E.D.) than the color. Every grower of Nymphaceae knows that the size, the strength and charm of his plants, their flowers and leaves depends entirely on the circumstances under which he grows them. If one wants small plamts with small leaves and flowers, and which flower sparingly, then one puts the seedlings in small pots in poor soil; even rich soil makes them only a little larger. If I want medium-large plants, I plant them in good or best soil in medium-size or large pots. If I want outstanding, large plants with large flowers, I put the seedlings of the same fruit, which furnished the small plants with small flowers in small pots, into the open soil or very large containers, to be cared for the best way and also with manure. Truelings (a word Caspary invented, E.D.), i.e. plants, which have self-seeded in large containers and good soil, reach the most significant size of all, as they grew under opportune conditions. As in artificial culture so in Nature. Poor soil, little nurishment makes small plants - and as the soil in entire land areas is often the same, one has as long as it remains poor and the same small plants, often in entire districts. But do they remain so, if one gives them better conditions, very rich, good soil? Definitely not. I have seen, that miserable plants of Nymphaea alba and Nuphar luteum - v. Leonardi once sent me very few specimens from Bohemia, which he thought to be Nuphar pumilum - became large and strong in good soil, really extraordinarly large, and one had the old var. minor and maxima on the same stock, the best proof, that there were no varieties.

If, however, it could be proven, that a planta nana or minor remains white under the best conditions of nutrition, of that the seed is true, then, such a variety makes more sense, but cannot lead to proof for N. odorata var. minor, Sims. For foundation of a variety I find morphological differences better than color and specially size, the form of the tubular flower, if short or long, the stamina, if they have broad or narrow filaments, the pupillistic (pupillus, Latin = minor or orphan = reduced ? E.D.) stigmatic rays. the appendices of the carpels, their relation of length to width, if and how they are furrowed or hollowed, the shape of the fruit, if ball-shaped, uniform, smoothly pressed, the form of stipules, their size in relation to the leaf, the status of pollen, if warty or spiny. I mentioned here those morphological points, which apply to Nymphaea alba, which I have examined from all countries of Europe either living or in alcohol, and in their cause I made numerous excursoins and trips for about 13 years, which proved important for the definition of varieties, or better said, when varieties showed themselves different, because we do not need to postulate them, but to find them in Nature through observation, or they are also such points, which are important in the differentiation of Nymphaea alba and odorata. When I stated, that the size of flower and leaves does not, as far as I know, justify a variety, it is thus with the two primary varieties of Nymphaea alba

I) polystigma (formerly melocarpa Carp) and
II) oligostigma (formerly ovcarpa Carp.)

I had to give up these names, because a subvariety of ovcarpa with flattened fruit was found at Seterwuhg in Russia and here in Prussia. The size of the seeds was a constant difference. I) polystigma with numerous carpels, has small seeds, and II) oligostigma with fewer carpels, very large ones. Of course, there are exceptions in rare cases. And the size of the pollen varies in a rather constant way with

Nymphaea tetragona Georgi 1775 (= pygmaea Sis. 1811).

Are now any ~~xxxxxxxxxxxxxxx~~ morphological varieties known of Nymphaea odorata ? Hardly! But only very doubtful. Already Pursch characterizes his var. rosea not only by color but also by leaf-form. For Nymphaea odorata I he says: N. folio orbiculato-cordatis - submarginalis lobio divericatis,acuminus obtuso, for var. β rosea: foliis cordatis -, obtusio,lobio divericatis,acutis. These differences seem to me to shatter into nothing,and that once according to analogy of Nymphaea alba,where the same difference of the form of the leaf is found on the same stem and change,according to the material available and proven by me. The main form was to have according to Pursch leaves lobis divericatis,which is not always the case. Quite frequently the lobes stretch very wide,and that as well for the main form as with var. β . With the main form the leaf is supposed to be subemarginatum, for var. β obtusum. I find it often with var. β emarginatum and for the main form obtusum,and, on top of it, for both apice subacuminatum. In other cases, as e.g. B. Sims l.c.t. 1652 presents for var. β the lobes of I are supposed to have acumen obtusum,for var. β however acuti; and are for both forms (I and var. β) the leaves lobis plus minus acuminatis,and for the leaves of both forms the leaf-lobes at times acuminae acuto (also for the main form,as Sims shows Bot.Mag. t. 819 3 times) and in other cases acuminae obtuso subobliterato. Finally, the difference between I. folio orbiculato cordatis and var. β fol. cordatis does not make sense. I do not find any difference in the main shape of the leaf of I and var. β. Varieties, of which you characterize the two first ones thus = α sinno and lobis of the leaf more or less rente (? E.D.) ~ β sinno and lobis more or less rounded ? To the latter form is cited N.reniformis Walter Car. p.155,which accor-

ding to proceedings of Decondell in Deless. Icon II t.5 is mentioned as synonym with Nym.uniformis Decondelle. Also cited is Nelumbium reniforme W. sp II 1260 as synonym. Willdmann based Nelumbo reniformis on Walter's authority according to his Nymphaea reniformis, and Willd. is entirely correct to consider Walter's Nymphaea reniformis as a Nelumbium, because Walter explicitly adds: "loculis monospermis, which fits only Nelumbium. Decandolle and his followers are therefor wrong to identify Nymphaea reniformis DC bc with Nymphaea reniformis Walter. As to Decandoll's Nymphaea uniformis in Deless.Lion concerns, and this plant my Torrey and Gray, the original does not exist any more in the herbarium Delessert in Paris. Neither Planchon (Ann. ? ? Ser. XIX 1853 p. 59) nor I have seen it in 1856, though Mr.Lasique brought together all the Nymphaeaceae, which were there, with great kindness and labour. The original has probably been eaten by worms, which worked much in the h.Deless. and destoyed it. As to the illustration of Nymphaea reniformis, I will not believe that it is correct concerning the grooved, rounded lobes until I have seen a leaf of the species. Of the hundreds of leaves, which I examined, is none that has ...., grooved, rounded lobes. The phantasy of a botanically unknowing artist may have created from a poorly dried and deformed and improperly positioned leaf with acuminated lobes the one shown in Decondolle's drawing. The phantasy of an artist is often the cause. of errors . Supposed, that such a leaf really existed once, it is to be considered as a monstrosity, on which no variety can be founded, and certainly, the same stem, which produced such a leaf, would also produce normal ones. In many leaves, in which I saw a strongly rounded sinus, this was never the work of Nature, but caused by disfiguration in pressing; But, there exist broad, rounded sinuses, but if constant with certain plants ?? That may be decided by american observers in situ.

The american botanists may decide in place, what varieties, diffe-

rentiated by morphological marks, exist for Nymphaea odorata. I also would like to recommend to you to prove the admissibility of I glabra and II villosa, which are based on differences, which may change often. I take the liberty to provide some viewpoints in establishing the varieties and, also, the analogy of the other species, better known to me, of the division Cartana DI, the Nymphaea alba L. and tetragona Georgi. Of both exist two geographically separated main forms; of alba I polystigma, westerly and southerly in distribution areas with long, narrow calyx-leaves, flowers and stamens, viable pollen, small seeds, yellow, single-tipped papillose rays, and numerous cancettes (the German word is Kanzetten ? E.D.), and II oligostigma (the word is blotted out by a stamp. E.D.), northern and eastern distribution territories, and in the mountains in the southern part, with broad, short calyx leaves, flowers - and stamens, warty pollen, large seeds, (one word covered by a stamp, E.D.) three-pointed, papillistic rays and few Cancettes. The two principal forms of Nymphaea alba have numerous sub-varieties, differentiated principally through the fruit, sphaeriorna (carrying hills) depressa (with smooth fruit) uncilata (with a very deep stygmatic disk) etc. Nymphaea tetragona Georgi shows also two principal forms. I) lata, with very broad, dried cylindrical Cross-stem-section(this is a guess, I cannot decipher a word. E.D.) broad, short calyx leaves, in the north and East of the territory, i.e. in East-Sibiria, Kamtchatka, and Manchuria, entirely corresponding the Nymphaea alba oligostigma. II) angusta, with small dried quadratic Cross- stem-sections (same word as note above, E.D.), and long slender calyx and floral leaves, in the South (Khasia Mountains in ??....) (NOTE: the Khasi Hills are in Assam, E.D.), and southeast of the territory (China and Japan). It is now to be seen, if there are not in North America such geographically limited varieties of N. odorata of these most natural and totally constant, remaining so in culture, corresponding

Of Nymphaea Lotus there are also such morphologically different geographical varieties; however, I do not want to expose further about this, in order not to be too wide- ranging.

Fruits I saw very few on N. odorata, only a few grown in Borsig's Garden in Berlin and some in wine spirits, which Mr. Eaton sent to me, though without closer statement of the place, where found. All were ball-shaped. One examines only ripe fruit, of who'se seed the arillus is fully developed, and who'se seeds are black-grey and not carmin, because the latter color is not ripe.

The Nymphaea alba of Nuttall (Gener. N.A. plants 1818 II p.73 " around Detroit" -, Micheni (Fl.b.Am. I NO) - "Canada ad Carolinam" - (in h. Michaux in h, Mus.Par. I saw N. odorata from "Canada" designated by Michener as N. alba) - is mentioned as present in North America, though this seems to be an error based on a mix-up with N. tuberosa Paine, but it may not be impossible, that Nymphaea alba exists in North America, therefor I give the differences of the plants N. alba and odorata as far as they are known to me.

NYMPHAEA ALBA L.	NYMPHAEA ODORATA Ait.
1) Grana pollinis aculenta vel grosse tuberculata, operculo laevi vel sublaevi.	1) Grana pollinis ubique aculeata.
2) Processus carpellorum carnosi triangulari - ovati vel oblongo-triangulari-ovati, interne ple - rumque subconcavi, 1-5 sulcati	2) Procissus carpellorum carnosi oblongo triangularis vel lanceolati, sublinearis, interne canaliculati.
3) Stipulas oblongo ovatas, elongato triangulares, anguste emarginatas, obtuse bicarinatae, ... ad 3 3/4" longae punctum vegetationis. rhizomatis supernatis cum	3) Stipulae subreniformes, late emarginatae vel ovato-reniformes, obtusi............oblique utrinque decurrentes, obsolate bicariantae usque ad 9 m longae, inferiores longe sub puncto vegetationis -rhizomatis relicter petiolo superstites

Nymphaea alba (cont'd)

petiolo putredine proxime ad punctum vegtationis rhizomatis destructae.

4) Pulvinaria foliorum in rhizomati vulva prominentia.

5) Folia in rhizomati Insissitu(?) ....internodia brevissima 1''' longa

6) Rhizoma crassius usque 4¼ "

Nymphaea odorata (cont'd)

...........punctum vegetationis rhizomatis vix superantis.

4) Pulvinaria foliorum in rhizomata vix prominentia.

5) Folia in rhizomate rariores, internodios longioribus 1½" cerciter longa.

6) Rhizoma tenuis usque 1½" crassus

With both of them the scars of the leaf stems are circle-round , for Nymphaea tuberosa Paine (Report of the regents of the University of the State of New York 1865, Sonder-abdruck (special reprint,E.D.) p.132) , the leaf-scars on the rhizomes,which I alone have studied so far for this interesting plant, they are transverse-lanceolatae (sc.circatricae) ancipites, and remind therewith somewhat od the lop-sided, two-edged of Nuphar. The rhizome of Nymphaea alba is unfortunately nowhere illustrated properly. Hayne (Arzney (medicine, E.D.).........IV t 35) only shows that of Nuphar luteum instead of Nymphaea alba, ditto Reichenbach (...... Fl. germ. VII t 70,probably a copy of Nayev): Dietrich (Fl. .... 11 t 765).

You wish for an illustration of the stipules of Nymphaea alba & odorata. It is enclosed. I believe to have also found very pointed stipules of Nym.alba (not with an outer rim) (Caspary creates a word: ausgerandet.Rand= rim,margin,thus: with an outer margin.E.D.). Those of Horst Bossig of N. odorata have a broad outer rim without being damaged,and it seems, that the rhizomes,which Mr. Eaton sent from N.A. are not with a rim,but pointed or blunted depending. The specimens

grown in our hothouses of N. odorata I saw with stipules with margine.

Paine says about his N.tuberosa :"connectivo stamine exteriorum supra antherae in cuspidem elongato". You write to me, that you find this also for N.odorata near St.Louis and I can confirm this of N. odorata of all localities, from which I saw them, from Canada to Florida, Texas and Guiana. The outer and middle stamina of all species have antherae appendiculatae; as the expression is, the appendix has latitude: Wegiter 1 : ¼ - 1½. Unfortunately I have not yet seen flowers of Paine's N. tuberosa. It is necessary, that the relation of width to length of the appendix be noted also for N.tuberosa.

THERE IS A DRAWING ON PAGE 13 OF THE ORIGINAL

The hair, with which the rhizomes of N.tuberosa Paine are covered ... are most striking. They are in part like the other Nymphaceae, in which many cells lie behind each other, 4 - 6 and more = a, and others with thicker hair = b, the base of which shows several, up to 3 cells in width. Such hair are otherwise not known for the Nymphaceae.

There are several names of american Nymphaeae, which are little or not known at all, and are either to be reckoned with N.odorata, or may belong to her and N.tuberosa. These are Nymphaea nitida Sims (Bot.Mag. XXXIII t.1359); N. rosea Rafinesquei (Med.Fl. 1830 II 45); N.maculata Rafin. (h.c.); N.; N. spicata Raf. (h.c.); N.parkeriana Lehmann (in Otto Hamburger Garten und Legumenzeitung 1853 IX p.529) Nymphaea parkeriana Lehm. collected by a certain Mr.Parker in Guiana. Originals I saw in h.Nooker and h.Lehmann, whose Nymphaceae I purchased after Lehmann's death, is nothing else but a small form of Nym. odorata, who'se leaf stems are on top partially hairy, though very little.

Though Nymphaea nitida Sims has been illustrated, and was much cultivated in Europe, there exists much obscurity about the plant, be -

cause no original can be obtained. I have never seen an original example neither in herb. North, herb. Univ. Britt., H.Linn.Soc., nor in any other herbarium. In Bernhardt, who purchased them, if I am not mistaken, is one flower and 1 leaf, without doubt from a cultivated, small N. odorata, mostly determined as N.pygmaea, corrected by pencil as N. pygmaea. In the Botanical Garden of Ghent I found a small form of Nymph. odorata as N. nitida, grown in a pot, of which I saw only leaves and stems, white-grey below, rarer - however on the old stock toward the border carmine. Sims gives 3 characters as specific for N. nitida: 1) the rootstock is perpendicular and does not seem ever acquire any considerable length; the illustration of the rhizome is very defective. but is not in anything different from the pityful N. odorata, grown in a pot, from which no judgement could be made. The rhizome is only 2½" long and belongs certainly to a plant of only a few years age. It can not be used to determine the characteristic, that the rhizome is perpendicular, because the rhizomes of young plants, specially in loose soil, e.g. deep mud, are for the related N. alba in the youth itself to 1½' long, which may take 10 years, are very frequently vertical and turn horizontal only later. In order to base the statement of a vertical rhizome, Sims should have grown the plant in open soil and not in a pot. 2) "Venis (folii) utrique exeratis". Mr. Wolldener (Hort.Beril. No. XXXIX) says of N. odorata, which he saw alive in Berlin "venis impressis". Sims believes, that (Bot.Mag. + 1652) Willderer did not have N.odorata but N.nitida in front of him, because N.odorata had been assigned "prominent veins" by Aitra (Hort Kew ed.2 III292; Bigelow (Am.med. bot. III 127); Torrey (Fl. New York 38). Already earlier I observed, that the veins of the dried leaf are at times raised, at times caniculate; I find this for N. odorata in pots in the Berlin botan.Garden to be present under fresh conditions

By analogy with other species, the nerves are sometimes raised, sometimes imbedded in fresh state, and therewith this characteristic dis - appears. I quote as example for this fluctuation Nymphaea blanda Negor, which cultivated very strong stock. I had last Summer about 19 in pots, which always had raised nerves. however the seed-started plants, which were anchored and sprouted in the basin, and from which oppulent plants with in part enormous leaves emerged, had sunk-in nerves, even when the plants were small. Only the middle-rib always is raised. 3) Sims says "N. nitida seems to require the constant heat of a stove or hotbed, to preserve it alive, whilst odorata is now found to be quite hardy.". From the word "seems" derives, that this is only hypothesis, and it is not worth to talk about it further. - I thus do not find anything in Sim's description, what would differentiate N. nitida from N. odorata. The illustration alone shows something, which I find mentioned no place about N. odorata, and which Sims himself does not pronounce, that the calyx is whirled on the outside. There is in North America also N. odorata with on the outside whirled calyx leaves to be explored. - Sims does not know the home-land of N. nitida. He supposes, that it could be America. Don mentions: "native of Siberia in lakes and the River Lena and in Dauria in quite waters" (Lineus Syst. i 1801 p.126). This is obviously incorrect and is based on mix-up with N. tetragona Georgi, which does exist there, and of which I saw many from Siberia.

Of the 3 species, which Rafinesque makes, I know nothing. Did Rafinesque leave an herbarium, and where is it ?? Are originals still on hand ?? I only can copy his diagnosis:

1) Nymphaea rosea Leaves orbicular, split at the base, lobes divaricati, acuti, lower surface red, petals rose colored. In New York, Ohio etc with smaller flowers, less odorous.

2) Nymphaea maculata Leaves orbiculata, subundulate, dentate, base cordate, lobes obtuse, a brown central spot on the leaves, petals white. In Canada and New York near Lake Ontario. Flower nearly inodorous, smaller, with many narrow oblong, obtuse petals.

3) Nymphaea spiralis Raf. s. (synonym ? E.D.) N. alba Mx. & N. odorata Ethot.) Leaves orbicular, emarginate, base split, colorate, lobes divaricate, obtuse, petioles and scapes spiral, calyx free-leaved, equal to the corolla. In the southern States. Flower white, smell strong.

N. spiralis seems to belong to odorata on account of the smell, N. maculata and perhaps also rosea due to almost missing smell, and maculata due to the localty: Lake Ontario to N. tuberosa Paine.

" Short characteristics of all Nuphar and Nymphaeae species not determined by us, would be very interesting " you write to me. Are you willing to consider the above as satisfying your wish concerning N. odorata? Of course, it is not short. But people, who want to search, must know, what they are looking for, and I want to ask you, if you consider it worthwhile, to translate this letter and to have it printed, possibly in the Transactions of the St. Louis Academy, to have 100 copies made at my expense, and to mail them to botanists and collectors all over America. I shall write a similar letter later about Nelumbium, Nuphar. I am now much too pressed through Miquel and v. Martins. But still another request with it, to add to the translation, namely, that whoever may have found something, which is a variety of N. odorata or any other american Nymphaceae, to send to me through the Smithonian dried and specially in alcohol specimens of rhizomes and fruit. To prove oneself is the principal item. I do not avoid costs.

I have sent $ 30.- (actually "Thaler" E.D.) to Mettenius, who is waiting for your disposition. -- I enclose my photograph and ask for one of you of the same size; I have a larger one of you.

I ask very specially again for your vita (Apparently a history of Dr. E's life. E.D.). A shall beg for it as long until I get it. Best greetings to your wife and Georg. May God protect you ! With best greetings and hearty affection, Your

R. Caspary

ps. With Nymphaea alba the submerged stem of the fruit sometimes
is simply bent backwards
or rolled up screw-like
without reference to specific varieties.

(translated from German script by Edgar Denison, August 1988)

Rec. Jun 7th

Königsberg i. Pr.
6. 6. 68

Lieber Freund!

Herzlich willkommen in Europa! Ich danke Ihnen dass [illegible] den Papier [illegible] Blätter zu [illegible] hätte schicken sollen, da ich in letzter Zeit sehr angestrengt gearbeitet habe [illegible] untersuchen. Ich habe um einen Ueberblick über die Zahl der Pollen zu bekommen an einigen 100 Pflanzen die [illegible] körner [illegible] gezählt, um die Procente der [illegible] bestimmen zu können. Es ist mir [illegible] der [illegible] Zeit zu [illegible] bestand der [illegible] [illegible] [illegible] in der [illegible] [illegible] bestand, der [illegible] [illegible] [illegible] Nuphar luteum - advena untersuchen. [illegible] bestand ist

sehr [illegible] und [illegible] an
[illegible] in den [illegible] hatte
die [illegible] [illegible] die [illegible]
[illegible] [illegible] alba-
Nuphar advena-pumilum u.
pumilum-advena blühen
leider noch nicht. Die Nuphar
advena hat sich 9 Jahre alt
Sämlinge [illegible] und [illegible]
von Leipzig bezogen, die ganz
[illegible] [illegible] sind, als die
alba-pflanze von Leipzig. Nymphaea
tuberosa hatte die Winter-
frost gut [illegible], blüht aber
sehr selten; Nymph. odo-
rata ist sehr zart, [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible], [illegible] [illegible]
[illegible] für [illegible], [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] — Die [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible]. [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] Die [illegible] [illegible]

[illegible] beschreiben.
Ist das nicht [illegible] zu [illegible]
[illegible]? Die Rosen bei mir
[illegible], ich habe ein Zimmer
[illegible] [illegible]
[illegible] Anfang Juli kommen.
Mitte Juli [illegible] nach [illegible]
land [illegible] der [illegible], die
ich und der [illegible] [illegible]
[illegible] nicht unterschätzen
[illegible] [illegible] trotz
aller Mühe nicht [illegible] Korres-
pondenz haben, da ich [illegible]
[illegible] [illegible]
zur Reise [illegible] Können
Sie nun nicht in diesem Monat
[illegible] kommen? [illegible]
[illegible] [illegible], [illegible]
ich [illegible] nicht [illegible]
[illegible] können. [illegible]
von 80 Mark ist nicht [illegible]
[illegible], [illegible] 13 Stunden
[illegible]. [illegible]
[illegible] können [illegible] bei mir
[illegible], [illegible] in der [illegible]
[illegible] nicht [illegible] halten. Die

von Freunden besprochen.
Hast du nicht noch Lust zu ma-
chen? Die Räume bei mir
genügen, ich habe ein Zimmer
für Gäste, jedenfalls möchte [illegible]
[illegible] gut können.
[illegible] [illegible] [illegible] Lang-
[illegible] der Nuphar, die
ich [illegible] der [illegible] [illegible]
[illegible] nicht [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] in den [illegible]
[illegible] habe, die ich bereits
der [illegible] hat mir Geld
zur Reise bewilligt. Können
Sie nun nicht in diesem Monat
hierher kommen? Ich habe
mich freilich sehr beeilt, dass
ich Ihnen die Reise nicht leichter
machen kann. Eine Reise
von 80 Meilen ist nicht ange-
nehm, jedoch in 13 Stunden
sind Sie hier. Und an Nym-
phaeen können Sie bei mir
sehen, was Sie in der ganzen
Welt nicht wieder finden. Die

[illegible]

Für Ihre Übersendung [illegible] besten Dank.

Herzliche Grüße an Ihre [illegible] Gemahlin [illegible]

[illegible]

[illegible]

Ihr R. [illegible]

Fig 1 m. n. 1/1

Fig 2 m. n. 1/1

Nymph. odorata

Fig 1 u. 2 Stipulae.

Fig 1. Rhizom mir von Eaton aus N. Am. geschickt in Blumentopf.

Fig 2 Rhizom der im bot. Garten in Berlin wie warmem Zufl., den Abflüssungswasser einer Dampfmaschine speist, und dessen bei + 24° R Wassertemperatur gezogen u. sehr üppig u. kräftig war, dicker als die Rhizome N. Am.'s von Eaton.

Nymph. alba L.

Fig 3 Stipula eines Rhizoms aus dem Laacher See bei Andernach. (Var. depressa Casp.)

Fig 3 m. n. 1/1

EDWIN R. SWANN & CO.

Apothecaries & Pharmaceutists,

S.W. CORNER OF TWELFTH & OLIVE STS

ST. LOUIS.

0 1 2 3 4 5 6 7 8 9 10

cm

Nuphar odorata var. sanguinea
Nutt. in the Am. Phil.
has almost all stamens transformed
into petals f. Dr. Durand

Rec. Jun. 7

Konigsberg in Prussia
June 6, 1868

Dear Friend !

Heary welcome to Europe. Unfortunately I call tha payan much later than it should have been, as I was lately very strenously occupied, in examining flowering items. In order to get an overview of the quality of pollen, I counted the the pollen grains, good and bad, of some 100 plants, in order to be able to better express the relation in the perianth. This is important to me because of the bastards of the Nymphaeae, which have formed here. Today I shall examine a new bastard, which has just now developed its flowers: Nuphar luteum X advena. This bastard is very interesting, varies in the color of the blossoms, and keeps the middle of both .... older ones. Nuphar advena - pumilum and pumilum-advena unfortunately do not yet flower. Of Nuphar advena I grew 9 year old seedlings in a pond, from seeds from Leipzig, which are shaped quite different from the older plant in Leipzig. Nymphaea .... stands the Winters here well, but floweres quite rarely; Nymphaea odorata is very tender, in the open can only be handled under cover; flowers little, never here, not even with artificial illumination. You write, I am surrounded by Americans. The more so I wish, tha t you come here and communicate more detail. Is'nt that possible to accomplish ?? You can stay with me; I have a guest-room. But , you would have to come prior to the beginning of July. The middle of July I go to Lappland on account of the Nuphar, which I cannot examine from the distance when dried, and, which I have not received alive despite all efforts, and which I need. The ministry has provided me with money for the trip. Can't you come this month here ?? I am of course quite sorry, that I cannot make the problem easier for you. A trip of 80 miles is not pleasant, but in 13 hours you would be here. And you could see Nymphaeas at my place, which you could not see in the entire world. In the open they are in part in their last flowering, and yesterday Nym. alba sphero........

rosea from Spain with about 30 deep-carmine-red blossoms open. The weather is ver fine with us, and promises to remain that way.

Thank you for your literary excerpts. Best greetings to your wife and your Georg, and equally to all of Braun's (the end of the sentence is not legible.E.D.).

I hear you will leave Berlin the beginning of July. I go to Lapland not by way of Berlin, and cannot remain anyplace on the return trip. If you do not come here, there may be the possibility of a meeting after the return from Lapland in Berlin or elsewhere. I hope to meet and see you in any case.

In hearty friendship, Your R. Caspary

(translated from German script by Edgar Denison, July 1988)

(translation of cover-sheet on separate page. Text is NOT in Caspary's hand-scribbling* E.D.)

* should be "hand-writing"

Frontpage of Caspary letter June 6, 1868. Text to drawings::

Nymphaea odorata Fif. 1 and 2 Stipula

Fig. 1 Rhizome sent to me by Eaton in wine spitits from North America.

Fig. 2 Rhizome of a plant grown in the Boroiz Garden in Berlin in a heated pond, fed by the condensate water of a steam engine in the open at + 24 R (Rheaumier, E.D.) water-temperature, very opulent and strong, the rhizome thicker than the N.Amer. from Eaton.

Nymphaea alba L.

Fig. 3 Stipule of a rhizome from the Laacher Lake near Andernect (Var. depressa Cnep.)

Nuphar odorata var sanguinea Nutt - Hb Au Phil

has almost all stems transferred into petals

Fide Durant

Recd Naples Nov 18th

Caspary

Königsberg in Pr.

2. November 1868

Lieber Freund!

Schon seit dem 2. October bin ich wieder hier, aber ich komme erst heute dazu [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. Ich habe [illegible] [illegible] [illegible] von 65° n. B. – 68½° n. B. in Norrbotten, Luleå u. Torneå Lappmarken [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] z. B. alpinus [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] Wakaniwa [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] Wallich [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] der 11.(?) oder 12.(?) [illegible] —

der Gattung für diese Pflanze gibt
[illegible] — [illegible]
[illegible]
[illegible]
[illegible] auf den Gebirgen [illegible]
[illegible]
[illegible]

In Betreff der Nymphaeaceen
bin ich [illegible] glücklich gewesen
und habe die [illegible], welche [illegible]
[illegible] Pflanzen — 9 [illegible]
Laestadius — [illegible]
[illegible] Nuphar
[illegible]
1, 2, 3. [illegible]
[illegible]
[illegible] Nuphar
intermedium [illegible]
[illegible]
[illegible] Nuphar
[illegible]
[illegible] Nuphar
intermedium [illegible]
Nymphaea alba. [illegible]
aperta fand ich bei 67½° n. B.
[illegible]

[illegible].

Ich war seit 9½ Monaten gar nicht [illegible]. Nach meiner Rückkehr fand ich solche Berge von Briefen u. [illegible] Geschäften abzumachen, daß ich noch gar nicht recht dazu gekommen bin, die Lücken auszufüllen, die die Reise in meinen Arbeiten an meinem [illegible] mir gemacht hat. Die Reise war nicht sehr ergiebig, da ich meist zu sehr [illegible] u. [illegible] musste, die [illegible] [illegible] in [illegible] sehr [illegible]. Ich habe mich sehr wenig mit neuen Pflanzen, außer mit Nymphaeaceen beschäftigen können. Näheres über meine Reise werde ich Ihnen später gedruckt zu senden.

Mit herzlichsten Grüßen Ihr
ergebenster Rob. Caspary

Haben Sie die [illegible] [illegible] mit dem Namen des [illegible] zugesagt zu haben von Kansas(?) [illegible] gegen die andern Exemplare, die ich [illegible] habe, [illegible]. Ich habe nur das 1 Exemplar [illegible] [illegible].

Herrn Dr. G. Engelmann

Rec. Naples Nov.18

Konigsberg in Preussen
November 2, 1868

Dear Friend!

Already since October 2 I am again here, but I get only today to select the few Juncus, which I found in quantity, I found Juncus filiformis every place from 65 n.O. - 68 n.O. in (1,2,3) mostly very low specimens, hardly one half as high as they grow with us. Juncus __________ was also not rare. Other Junci, e.g. alpinus I saw rarely. Juncus foedidus L. I only found near Wakaniwa on the Muonio in the russian ________ and upon the Wallch (? E.D.) consisting of gneiss near ________ ; are already brown-green as it was September 11 (?) or 12 (?).- The label with the plants gives the date correctly. - are quite foreign. Juncus ________ and ________. I saw no place. However I was little in the mountains as there were hardly any Nymphaeae there.

What the Nymphaeaceae concerns, I was very fortunate and listed the rushian, which provided the genus for the northern plants - 9 corms to Lonstadino (? E .D.). It is here in Nuphar luteum and pumilum and bastards 1,2,3, and others in ______. The bastards have bad pollen and develop very few seeds. Nuphar intermedium Anders & Ledebour is a bastard. It stands between Nuphar pumil. & luteum.- Anderman's statement, that Nuphar intermedium exists in Lappland is wrong. Nymphaea alba nigrostigma aperta I found to 67½ n.O. north, far the other side of the polar circle.

I know nothing of you since 3½ months. Since my return I found mountains of letters and endless business to accomplish, that I can not get to it, to close the gaps, which the trip has made into the free-time for my friends. The trip was mostly very strenuous, as I had to travel mostly in a boat on rivers or on foot, the distances enormous and, therefor, very time-consuming. I was not able to occupy mysekf with other plants much besides Nymphaeae. More detail

about my trip I shall send to you later in printed form. With heartiest greetings your most devoted

Rob. Caspary

Please have the kindness to let me have the name Innino (?? E.D.) of Kannisjaris; unfortunately the two specimens I had of this were lost, and I brought only one specimen of it here.

(translated from German script by Edgar Denison, August 1988)

Rec. March 5th 1877
Answ. — 20

Königsberg in Pr.
11. 2. 77

Lieber Engelmann!

Besten Dank für Ihre Briefe vom 5. Juli u. 19. Oktbr 76, die 3 [illegible] Nymphaea flava [illegible]. — Zuerst die Frage: haben Sie [illegible] [illegible] 14 [illegible] [illegible] erhalten? [illegible]

1) Was die Flora von Californien betrifft, die [illegible] [illegible] [illegible] [illegible]

2) Was den [illegible] betrifft [illegible] [illegible] Holz [illegible] amerikanischen [illegible] [illegible] [illegible] [illegible] amerikanischen [illegible] [illegible] nordamerikanischen Flora [illegible] [illegible] [illegible] a) eine [illegible] [illegible] von Stewartia

die ich Kowalewski nenne, ist in meinen
Stücken, etwa 1'' im Durchmesser, jetzt ähnliche
in Florida, [illegible]. b) mehrere Stücke
[illegible], welche Abdrücke von Sabal
sind, Sabalites [illegible] Lesq., c) eine
Carya, d) Celastrus u. Rhamnus Früchte oder
Blüthen, die wenigstens früher beschrieben u.
[illegible] vorgefunden sind – Schlage die [illegible] durch-
gezeichneten Zeichnung meiner ausgezeichneten
Durchschnitt bei: Fig. 8 u. bei Fig 1, 2, 3 [illegible]
[illegible], Fig 4 – 7 Durchschnitte von verschiedenen Seiten.
Die Zeichnung giebt genug [illegible]
kaum mehr Worte [illegible]. Ich habe die Pflanze
die nicht sehr klein ist, für eine Cactacee halten
mögen u. sie Batzea cactoides genannt,
auch beschrieben [illegible] in nuce [illegible] kurz in den
Sitzungsberichten der [illegible] Gesellschaft, die
Sie in St. Louis haben. A. Braun, der auch
vor 2 Jahren hier besuchte, meinte es sei diese
3) Pflanze eher ein Arceuthobium, als eine Cac-
tacee. Ich kann mich der Ansicht nicht befreunden.
Da Sie sich jedoch mit Arceuthobium besonders
beschäftigt haben, möchte ich Sie um Ihre Meinung
bitten. Ich kenne nur Arc. Oxycedri, habe jedoch
mich [illegible] bemüht [illegible]. Nach Hookers Abbil-
dung (Fl. boreali-americana) scheint Arceuthobium
Oxycedri [illegible] alle Verwandten [illegible] 2 Punkten
nicht 1) Batzea hat [illegible], [illegible] oben
völlig ganzrandig u. nicht 2 lappig, wie bei Arceu-
thobium ist. 2) Batzea hat auf den [illegible]
tragenden Achsen lange, [illegible], [illegible]
[illegible] Blätter; die bei Arceuthobium sind

alle dreinadligen Species. [illegible] die [illegible]
[illegible] und doch einige Proben der nord-
amerikanischen [illegible] z. B. [illegible] anneh-
men. die Gattung [illegible] mit [illegible]
[illegible]

In Frankreich finde ich auch dreinadelige Kiefern,
die [illegible] P. Taeda vermuten. Ich habe [illegible]
[illegible]

Die Mexicanischen Hölzer sind sicher zum größten
Theil nicht aus dem Mexico, sondern aus älteren [illegible]
[illegible] die nordamerikanischen [illegible]
[illegible] Ich habe [illegible] einige
[illegible] solcher Hölzer [illegible]
[illegible]
[illegible] Hölzer [illegible] nordamerikanischen Bäumen [illegible]
[illegible] Ich [illegible] einige [illegible]
Mark (1 [illegible] = 3 Mark) 200–300 Mark [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

Für Nymphaea flava besonderen Dank. Ich
habe 4 Knollen von Cambridge erhalten. 2, die
besten, waren unterwegs erfroren, die [illegible]
−7° R im November [illegible]
[illegible]
[illegible] Flava [illegible]
[illegible] Andrieux in Mexico 1834 [illegible]
[illegible] Th. J. Gay's [illegible]
bei Gay [illegible] mit folgender [illegible]: „No. 541
Nymphaea à Yotla, dans le lac de Chalco
14 Mai. Fl. rouge et jaune, C'est le jaune
qui domine." 1 [illegible] 1 [illegible]
Mus. paris., [illegible] Delessert

(für die Nymphaeaceen

blühen sehr schlecht. Ich habe die Pflanze) in meinem
Edendorf(?) gezüchtet u. Nymphaea Blanchardi(?) [illegible]
vor fast 20 Jahren benannt. Zum Theil ist
es Nymphaea [illegible] Lehm., vielleicht
auch die mexicana Zuccarini (nach Gray,
die Pflanze Grays ist Nym. elegans aus Mexiko, [illegible]
blühend). Es ist mir nicht bisher gelungen, ob-
gleich [illegible] Brown u. A. Braun, auch Prof.
v. Martens sich alle Mühe in Berlin gaben, eine
Abschrift des Textes der Nymph. flora von Au-
Dubois' Werk in Folio zu erhalten; es ist
in der Königl. Bibliothek zu Berlin nur defekt
da. Ich werde mich nach den westlichen Mu-
seen wenden müssen, wo ich das [illegible] Werk
vermuthe. Ich wäre Ihnen sehr, sehr dankbar,
das Sie mir Nymph.-flora haben zu senden(?)
[illegible]. Vielleicht ließ sich die Stellung der
Pflanze recht gut bestimmen lassen; es
ist wohl die 1. Nymphaeaceen der [illegible]
Lotus in Amerika, die die [illegible]
[illegible] Vorschlag, aber ganz glatte Blüthen
[illegible], die [illegible] dauernd. — Eben
habe ich die Nymphaeaceen für die Flora bra-
siliensis von v. Martius' [illegible] gemacht u.
an Eichler geschickt; dabei 11 Tafeln mit [illegible]
[illegible], alle nach den Originalen
abgebildet, die [illegible] zu erreichen waren.
[illegible] eine neue, kleine Nymphaea
N. [illegible] Casp., welche Blüten von [illegible]
[illegible], durch Hildebrand erhalten. Ich arbeite unausge-
setzt an den Nymphaeaceen. Das Werk wird Mühe
haben. Die Darstellung [illegible] [illegible]
sind sehr, sehr [illegible], [illegible] Ihr Nuphar Kal-
mianum ist mir [illegible], [illegible] Nuphar pumilum
[illegible] sehr [illegible] Zustand.

Leipzig rec March 5 1877

4) Nun noch eine bitte! In meiner [illegible], die ich [illegible], mache ich alle Jahre im Herbst einige [illegible], die meist terra incognita [illegible] 2 [illegible] 70 [illegible]

[illegible]

2 [illegible] Conomitrium julianum, [illegible]

[illegible] Fontinalis, [illegible] Typus der nordamerikanischen Fontinalis [illegible]. [illegible]

1) Conomitrium julianum [illegible] 2) Fontinalis [illegible] [illegible] NAM. [illegible]

[illegible]

[illegible]

1. 4/1

2 4/1

3 4/1

20/1 4

20/1 7

20. 6

5 20/1

1/1

8 nat size

in Amber

Patzea gnetoides Caspary

0 1 2 3 4 5 6 7 8 9 10
cm

1.

4/1

2

4/1

3

4/1

6

10/1

7

10/1

10/1

x

5

10/1

1/1

8

nat. size

Tulipa gesneriana Copenh

in Amber

Rec. Mar. 5
Ans. " 20

Konigsberg in Prussia
Feb. 11, 1877

Dear Engelmann !

Best thanks for your letters of July 5 and October 19,1876, the 3 manuscripts and seeds of Agave and Nymphaea flava. - First the question : Did you receive the packet of essays of mine about 1½ years back through the Smithonian Institute ? I would be sad, if it got lost.

1) As to the Flora of California, which contains yours of the Cacti, please write the entire title, so that I may order it. I must have the book.

2) As to the wish, to see the north-american oaks anatomically treatet, it surprised me, because I was then about to write to you with the urgent request, to send me the wood of as many northamerican trees as possible, as it was absolutely necessary, that I get an anatomical overview of them. There has been pressure here for a long time, 'til I decided to work on the plant inclusions in amber and the diluvian timbers. This shows now the relationship of amber-plants with the north-americans, which was known already to Göppert, in a much stronger degree, than he knew, and I am very much turned to the now living american Flora. For this new proofs, other than those, which Göppert gave : a) an outstandingly well preserved flower of Stewardia, which I named Kowalewskii, is in my hands, about 1" in diameter, now similar in Florida, Mexico. b) several pieces, rather large, with impressions of Sabal......., Sabalitis Renowii, Carp. c) a Carya d) Celastrus and Rhamnus fruits or flowers, which at least today are present specially in Iran (? E.D.). I enclose the traced drawing of an oustanding fragment: Fig. 8 Gr. Fig. 1, 2, 3 branches, Fig. 4-7 fruits od various sorts. The drawing gives enough information ,I can spare the words. I may consider the plant, which is very small as a Gaetacea ? and called it Patzea gaetoides and

described in nuci, very briefly in the meeting reports of the Physiological (?.E.D.) Society, which you have in St. Louis.

3) A.Braun, who also visited here 2 years ago, thought the plant was an Arceuthobium, rather than a Gaetacea. I can't agree with the opinion. As you have worked specially with Arceuthobium, I want to ask you for your judgement. I know only Arc. oxy .... (oxycidei ? E.D.) but have only male specimens. According to Hooker illustration (Fl. borealis americana) Arceuthobium oxycidei and probably the relatives do not fit for 2 reasons) 1) Satzia has a perigon, which on top is entirely fullrimed (i.e. "entire" E.D.) and not 2-lipped as with Arceuthobium. 2) Satzia has on the branch portions, which do not carry flowers, long, linear, fleshy, recurved leaves; those of Arceuthobium are three-cornered, drooping. If you can, please send me some types of northamerican Arceuthobia, e.g. Arc. varietum (? E.D.). The genus Gaetum with rounded leaves fits better.

In Bronstein I find also three-needle pines, which all remind of P. Taeda.
I have of it several pieces.

The diluvian timbers are certainly to the largest part not from the diluvium but from older deposits, and the american trees should come much into consideration here. I have several hundred polished pieces of such timbers of the diluvium, most of them are Pines. It would be most desirable for me to have timbers of american trees for comparison. I would gladly pay several hundred Mark (1 Thr = 3 Mark), 200 - 300 Mark for a good collection, which has been correctly identified by you. You could determine the price. Cones of conifers, flowers, leafstems would be very welcome; specially flowers with pollen, which is found abundandly in amber. Of course, the pollen of Pinus and Picea species are related to each other.

Special thank for Nymphaea flava - I received 4 ~~pumps~~ clumps (rhy - zomes ? E.D.) from Cambridge. Three, the best, were frozen on the

way, as we had already in November - 7°R (Reaumier, E.D.). But the smallest one cultivates and grows well; I hope to get it through. The plant is not new to me. It was found in Mexico by Andrinesi around 1824. Specimens I saw in Ch. J. Gay's hb; written (? E.D.) by Gay lay a slip with the following inscription:"Nro 541 Nymphaea à Yotla, dans le lac de Chalco May 14. Fl. rouge et javine (c'est le janne qui domine)" 1 flower and one leaf to each herbarium H. mus. Paris, h.Delesert. Flowered very poorly. I did draw the plants for my Nymphaeaceis Edendis and named Nymphaea akmost 20 years back. In part it is Nymphaea tussilagifolia Lehm,may-be also N.mexicana Zuccariei (but not Gray,the plant of Gray is Nym. elegans Hook,because blueish). I have not been successful to get a copy of the text for Nymphaea flava from Audubon's work in folio, though Cecilie Braun and A. Braun,and also Prof.Martens tried very hard. It is only in the royal library in Berlin. I will have to aproach the British Museum,where I did see the work actually. I am very, very thankful to you, to let me have the Nymphaea flava. Now, it will be possible to determine the genus of the plant; it is probably the 1. Nymphaea of the section Lotus in America; the linear stigmatic elongations,the entirely smooth pollen,the runners point to this. - I just prepared the Nymphaea (alacea,E.D.?) for the Flora Brasiliensis by V. Martinis and sent to Eichler; with it 11 tables with very precious pieces, all mine and originals, in illustrations,as far as they could be obtained. Received from Zerpiter (? E.D.) again a new,blue Nymphaea, N.sansibariensis,probably the prettiest of them all, through Hildebrandt. I work without stopping on the Nymphaeaceae. Good work takes time. The determination of species through crossing,delays me very,very much, but provides solid ground. Your Nuphar is a good species;

forms with Nuphar pumilum a very sterile bastard..

Now a request..For my recreation,,which I too must have, I undertake each year several excursions in the Fall into the local province,which is mostly terra virginica and move with my own boat,, 2 men and wagon for the boat and horse from lake to lake; I myself am. of course, on foot. Last Fall I examined in 3½ weeks more than 70 lakes. This gives me very interesting contributions for the distribution of the Nymphaeaceae. In this I arrange constantly and systematically for phytographic demands and important publications.. I do not collect sites, but every quarter mile all plants,which I find, and also all plants,which I find in the lakes which are critical or unknown I take along..The mosses I send to Mr.Schimper to Strassburg; He writes to me today, that I had found 2 of great interest, and these point again to northamericans;:This is Conomytrium inlianum,very rare in Europe, and has never been found in a lake,except in North America and the Southern States; and second,an entirely new Fontinatis of a type of the northamerican Fontinatis disticha..Now the request :: Please get me 1) Conomytrium inlianum from South American swamps,. and 2)Fontinatis dis......... Sullivan is probably dead ?? I know of nobody in NAM who collects them..

Hearty greetings from my wife,who invites you to come to us !! Best greetings to your wife and Georg. Your greatest admirer, Your

R. Caspary

The following page I can not tear loose
from dense lobe.

(translated from German script by Edgar Denison, August 1988)

Rec April 20th
Ans May 6

Königsberg 1877
den 6 April ~~1877~~

Lieber Engelmann!

Ich schreibe um Ihnen eine Nachricht zu berichten, die Sie recht unerwartet schmerzlich berühren wird, als wir davon getroffen sind. Alexander Braun ist nicht mehr unter den Lebenden. Er ist am Gründonnerstag den 29. März früh um 7 Uhr 35 Minuten an Brustfellentzündung gestorben.

In der Nacht vom Mittwoch zu Donnerstag vom 21/22 März 1877 erkrankte er, wie er meinte, an rheumatischen Schmerzen in der Brust, u an Fieber.

Der 22. u 23. März waren erträglich.

Am 24. März stellten sich heftige Schmerzen in Schultern u Bauchmuskeln ein. Der behandelnde Arzt Dr. [illegible] Morphium; die nächste Nacht war ruhig.

Sonntag den 25. März verschlimmerte sich der Anfall mit erneuertem Fieber; Morphium war erfolglos. In der Nacht von Sonntag zu Montag wurden die Athembeschwerden stets stärker, [illegible] der Vater von seinem

Zeit zu schwitzen begann. Gegen
gegen 4 u. 5 Uhr früh wurden die
Kinder geweckt, weil das Aufsteigen
befürchtet wurde. Der Vater traf
einige Anordnungen über seine
Beerdigung [illegible], die ich noch nicht
näher erfahren habe.

Montag, den 26. März, ließ Dr.
Bergmann ihn um 7 Uhr bei ihm
[illegible] [illegible] [illegible] zu Rath,
[illegible] [illegible] [illegible] [illegible] der
[illegible] [illegible] [illegible] [illegible]
[illegible] 10 [illegible], 2 [illegible] u.
8 [illegible] angeordnet.

Dienstag früh den 27 März, [illegible]
[illegible] [illegible] gegen 1 1/2 Uhr früh
alle Familienglieder um das Bett
des Vaters, Hermann war auch da.
Der Vater nimmt von allen Abschied
[illegible] u. [illegible] mit ihnen [illegible]
[illegible] Hermann u. [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible].
Dann schlummert er ein, erwacht aber
mit großen Schmerzen u. [illegible] [illegible]
nach [illegible] bis zu dem Tode. [illegible]
[illegible] [illegible] [illegible] der [illegible]
wiederholten sich öfters. Als Bergmann
um 7 Uhr früh kam, stellte er jeder
die Krankheit [illegible] [illegible] [illegible] letzten
Stadium [illegible], obgleich [illegible]

später Magdeburg, der Vater wurde
[illegible] bewogen, Arznei zu nehmen,
da er das Unglück nicht hatte, über-
zeugt, daß er stärker, [illegible].
Die nächste Nacht von Dienstag zu
Mittwoch ging [illegible] der Mittwoch
verlief ruhig, zu entscheidenden besseren
Zeichen [illegible] Mittwoch den 28.
März gegen Abend heftiges Fieber
ein u. der Vater fing an irre zu
reden. Donnerstag früh gegen 5 Uhr
wurde er ruhiger, das Absterben
begann, gegen 7 Uhr 35 M. war
das Leben entflohen.

Sie verlieren Beide in ihm einen
treuen, bewährten Freund, ich meinen
besten, den ich je hatte. Und die Wissen-
schaft erfährt einen Verlust von schwerer Be-
deutung. Seine Schriften zu be-
urtheilen, [illegible] seine [illegible]
u. [illegible] Monographien, nach seinen
[illegible] Untersuchungen [illegible]
[illegible] Werk zusammengesetzt hat. Ich
halte ihn für den bedeutendsten [illegible]
[illegible] u. [illegible] Botaniker der
[illegible], [illegible]
[illegible] die [illegible]
[illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] als Jack of

als trader nützt, dem großen Pub-
likum, wegen viel mächtigeren
Plato gesetzt, durch Handelsgeschäf-
ten u. [illegible] [illegible]
gewandten [illegible] Arbeiten [illegible],
aber es zu großen Ruf gebracht hat.

Ich weiß daß es nicht möglich
ist Ihnen davon zu erzählen,
aber, was ich las, wie Sie bekannte
[illegible] in Deutschland haben
will ich Ihnen erst kürzlich berichten.

Zum [illegible], der heute um
8 Uhr [illegible], statt haben soll, kann
ich nicht warten. Man wird bedauern
müssen zu [illegible], weil Sie gewiß
sich in [illegible] der [illegible]
[illegible] [illegible] Rath [illegible]
[illegible] befindet, weil ein [illegible],
der (Separatbericht) [illegible] [illegible] nach [illegible]
hat, [illegible] [illegible] macht. Wie [illegible]
nicht [illegible] u. hat die größten [illegible]
[illegible] Seite oben unter der
[illegible]; hoffentlich gelingt es [illegible]
[illegible] [illegible] zu be-
seitigen.

Mit besten Grüßen an meinen
[illegible] [illegible] Morgen [illegible]
[illegible]

Ihr
Robert [illegible]

Rec. April 20
Ans. May 6

Konigsberg, April 1,1877

Dear Engelmann!

I write to annouce a loss to you,which will touch you yourself as much as we have been hit. Alexander Braun is not living any more - he died on Maundy Thursday, March 27 in the morning at 7:35 of inflamation of the breast-cage (pleuresy, E.D.).

He took sick during the night from Wednesday to Thursday,March 21/22 1877,with, as he thought, rheumatic pains in the lungs and with fever.

The 22. and 23. of March were tolerable. On March 24 appeared pains in the shoulder and abdominal muscles. During the afternoon his doctor, Dr.Strassmann prescribed morphine. The next night was tolerable. Sunday, the 25th the attack recurred with more fever; morphine did not work. During the night Sunday to Monday breathing became very difficult , so that the father began to talk of his death. Between 4 and 5 in the morning the children were waked up because the end is feared. The father gives certain instructions about his collections etc. of which I have not yet learned any details.

Monday, March 26 Dr. Strassmann is there already at 7 AM,and and brings Prof.Waldenburg for consultation,diagnosing an inflamation of the left side of the breast, ordering 10 cupping glasses,2 bloody and 8 dry. Tuesday, March 27 early, Julie,who awoke, called all members of the family to the bed of the father; Johannes was also there. The father takes leave from all, blesses them,and prays with them,talks to Johannes and conveys greetings to all absent ones by their names. Then he falls asleep,but awakes with great pains,and calls all the time for deliverance through death again and again. When Strassmann gets there at 7 AM,he finds the sickness not yet advanced to the ultimate stage and neither does Waldenburg later,and the father is being urged to take medicine, which he refused in the conviction,that he

was stronger. The first night, Tuesday to Wednesday and also the Wednesday passed quitly, in fact, really better. However, Wednesday, March 28 severe fever developed toward evening, and the father began to talk confusedly. Thursday, early around 5 o.c. he became quiter, the death began, and at 7:35 life was lost.

We both lose in him a true, trusted friend, I the best I ever had. But for science the loss is of immense significance. Most to be regretted is, that he did not combine in one opus his spores in a monograph nor his morphological research. I consider him as the most important, knowledgable and deepest botanist of the times, with an outstanding character. The younger generation has unfortunately very many pushers (ambitious ones, E.D.). Rachs specially, who is supposed to be a firm character, has as "Jack of all trades" (verbatim in the text, E.D.) has got a huge reputation in the large public, which includes the medics group, through writing of handbooks and rewriting of original subjects of sound judgements.

I know, that it is not possible to replace your Braun, but, to my ability, I will gladly supply what botanical needs you may have in Germany.

To the burrial, which is supposed to take place this afternoon at 3 pm I can not go. My wife needs me at home, because she is in treatment of the most oustanding surgeon of our city, Prof. Schönhorn, because a fracture (thigh) gives her great trouble as no binding has properly closed it. She cannot walk and the worst pains are are on the right side, up below the breast; hopefully Schönhorn will be able to provide a breast-binding.

With best greetings from my wife and me to yours with hearty veneration

Your Robert Caspary

(translated from German script by Edgar Denison, July 1988)

Rec Sept 24
Ans Oct 3d

Königsberg i. Pr.
1. Septbr. 1877

Lieber Freund!

Wieder habe ich die traurigste Veranlassung Ihnen zu schreiben, es hat mich der schmerzlichste Verlust betroffen, den ich erleiden konnte. Meine theure Frau ist am 29. August Nachmittags 2 Uhr an einer Lungenentzündung der rechten Seite nach nur [illegible] Krankenlager gestorben. Ich schrieb Ihnen, dass sie im März u. April sehr viel durch einen [illegible] zu leiden hatte. Die Sache wurde so schlimm, dass ich mich an den [illegible] Universität Professor Schönborn wandte, der mit größter Gewissenhaftigkeit u. in sorgfältigster Weise die Leidende untersuchte, aber nicht den mindesten [illegible] [illegible] [illegible] für eine [illegible] Krankheit [illegible] zu [illegible] brachte. Ich musste meine Frau zu Herrn Dr. Langerhans nach Berlin schicken, der auch die [illegible] sehr [illegible] fand u. [illegible] nach vielen Versuchen [illegible] [illegible] [illegible] war. Diese [illegible] [illegible] in den [illegible]

[illegible]

einer asthmatischen Störung, aber auch
zu 1 1/2 Tage starker Husten einge-
stellt. Der Hausarzt Dr. [illegible] Schäffer
[illegible] behauptete, dass Krankheit sei zwar
[illegible] die Lunge jedoch gar nicht ange-
griffen. Zu meinem großen Schrecken
kam der 11. Aug. Abends [illegible]
[illegible] Am 12. Aug.
[illegible] wurde [illegible] stärker, ich [illegible] sie
am Nachmittage 3 mal, das letzte mal
um 1 1/4 Uhr, [illegible] mit
ihr, sagte, dass ich [illegible] gut [illegible] gemacht
habe [illegible] ich [illegible] ich
[illegible] gar nicht wer ich bin. Um 2 Uhr
[illegible] die Mutter [illegible] meine Schwägerin
mit Johanna [illegible]
[illegible] lag in den letzten
Zügen. [illegible]
[illegible] Athem-
[illegible] die Augen [illegible] offen
[illegible] ge-
richtet. Nach einigen Augenblicken [illegible] der
Puls [illegible] still. Eine Stunde darauf
kam der Arzt, der nur den eingetretenen
Tod constatiren konnte. Sie starb
3 Minuten vor meinem Geburtstage [illegible]
dem nächsten [illegible] den 31. August Nach-
mittags 5 Uhr begraben. [illegible]
[illegible] vor meinen Augen die Zukunft ganz
[illegible] In Berlin [illegible] die Mutter

Wenn Sie Namen mit Geschmack an der [illegible] [illegible]. Was macht ihr beiden [illegible] [illegible], Mann? das ist die Frage [illegible] [illegible]. [illegible] ist doch [illegible] [illegible], die [illegible] [illegible] [illegible] [illegible] zu können, [illegible] du aber [illegible] [illegible]. Was macht ihr denn mit [illegible] Kindern von 16, 14 u. 8 Jahren?

Mit Ihrer Tochter [illegible] [illegible] habe ich [illegible] [illegible] [illegible] [illegible] [illegible] in der [illegible] zu [illegible]. Die [illegible] ist [illegible] nicht [illegible], da [illegible] [illegible] ist, habe ich an der [illegible] [illegible] [illegible], so [illegible] Ihnen [illegible] u. [illegible] nicht [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] — [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] Ihnen [illegible] [illegible].

[illegible] [illegible] habe ich [illegible], die [illegible] [illegible] [illegible], aber — [illegible] [illegible]. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] nicht [illegible]. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible], [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. [illegible] [illegible] [illegible] ich [illegible] [illegible] [illegible] nicht [illegible].

Ihre [illegible] habe ich [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. [illegible] [illegible] habe ich [illegible] noch nicht [illegible] [illegible] [illegible] [illegible], hoffe aber bald dazu zu kommen. [illegible] [illegible] [illegible] [illegible] ich nicht [illegible] [illegible], [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] — [illegible] [illegible] [illegible] [illegible] ich [illegible]

April u. Mai drückend heiss. Am 29.
Mai zog stark [illegible] das [illegible] über uns
hin an. dann verbrachte sie die Som-
merferien 4 Wochen in Oliva bei
Danzig an der See in herrlicher Ge-
gend. Ich konnte leider nicht dort
hin u. wollte sich nicht, besonders die
auch [illegible] bei ihr war. Am 29.
Juli kam sie zurück. Am 4 August
ging ich nach dem [illegible] Strande
auf [illegible] [illegible], die ich
alle Jahre [illegible] [illegible] zu machen [illegible]
[illegible] meine Erholung. Die Gegend ist
eine der schönsten des [illegible]. [illegible]
[illegible]! Am 19/20 Aug. in
der Nacht erkrankte Marie an schwerem
[illegible] [illegible], der [illegible] [illegible]
ging von der [illegible] der [illegible] Seite
der [illegible] aus. Mir wurde dies erst
am 24. Aug. [illegible]. Am 25. Aug.
[illegible] zu Hause. Ich fand den
Zustand meiner [illegible] sehr bedenklich.
Nach der Erkrankung hatte sie sich nicht
[illegible], eine Nacht [illegible] durch
[illegible] [illegible], 50 [illegible], wodurch
[illegible] sie [illegible] [illegible] [illegible] zu
[illegible] [illegible] von [illegible] [illegible] [illegible]
[illegible] [illegible] worden, dann hatte sie

Rec 24 Sept 1877

Notschall [illegible] — einige Zeitschr[illegible]
[illegible] in guter Entwicklung zeigt
die Gelegenheit zu einem guten Querschnitt
von 1/4 Zoll Quadrat [illegible] er-
halten u. concentrischen Schnittbildt.
[illegible] grössten Stücke zu erlangen, wenn
der [illegible] und dessen [illegible] sind. [illegible]
[illegible] habe ich [illegible] nach
den von Ihnen gesandten Zeichnungen ge-
sucht, jedoch nicht bestimmt die Art
gefunden. — Ich sende [illegible]
die einer merkwürdigen [illegible] — vor
[illegible] nicht sagen — ein [illegible] ist
von über 400 Jahren [illegible]
die auf der allgemeinen Ausstellung in
[illegible] verwendet waren. Ist
denn da nicht etwas zu erfahren?
— Ich habe 2 Lithographien beendet
geschrieben, eine für die Flora von
Regensburg u. eine für Trimen's
Journal of Botany, beide mögen
jetzt im Druck sein — Lorentz
[illegible], [illegible] u. Handschriften
[illegible] eigenthümlich [illegible]
[illegible] kann irgend Jemand
[illegible], sind von
den [illegible] für 31,697 M. der

Regierung angeboten, die sehr
begierig ist, sie [illegible] Herba-
rium in Berlin zu kaufen, wenn
auch der [illegible] der [illegible]
nicht [illegible]. Auch die [illegible]
[illegible], die auf 5000 Thlr geschätzt
ist, wollte die Regierung ankaufen.
Im April 1878 wird die Sache
[illegible] entschieden werden.
— Ich habe über 62 [illegible]
[illegible] in den [illegible] die ich
[illegible] mit [illegible]
[illegible], welche mein eigener [illegible]
gebauter [illegible] [illegible] u. 2 [illegible]
[illegible] die [illegible] oder ein [illegible]
[illegible] Morgens u. Abends [illegible] ge-
gessen. Ich habe [illegible] 4—5 [illegible]
[illegible], [illegible] mit [illegible]
4—5 mit [illegible]
u. einige mit den [illegible]
[illegible]
[illegible] gefunden. Das Wetter
war [illegible] — [illegible]
[illegible] wohl! [illegible]
[illegible] [illegible] herzlichste
Grüße an [illegible] Kinder u.
[illegible] - [illegible] Ihr

[illegible]

Rec. Sept. 24
Ans. Oct. 3

Königsberg in Prussia
Sept. 1, 1877

Dear Friend !

Again I have the most sad reason to write to you, as I have been smitten by the most painful loss, which I could suffer. My dear wife died August 29 at 2 o.c. in the afternoon of a pleuresy on the right side after not quite 11 days of sickness. I wrote you, that she had to suffer in March and April through a fracture neglected by the falily doctor (verbatim in German: " house-doctor", E.D.). The matter became so bad, that I turned to the surgeon of our university, Prof. Schönborn, who examined the affliction with great conscientiousness and diligence, but who could not create the desired truss with the inadequate mechanical means, which are available here. I had to send my wife to a Dr. Langgurrit in Berlin, who found the case also very difficult, and who after many trials was able to fashion a somewhat suitable truss. These tortures fell into March, April and M ay of this year. On March 29 Braun died, which touched her very much. Then she spent the Summer vacation 4 weeks in Oliva near Danzig at the ocean in a marvelous area. Unfortunately, I could not be there, and recovered well, specially, because Cecilie was with her, she returned on July 29. On August 4 I went to the Karteuser District for bota - nical excursions, which I used to undertake every year. That is my recreation. The area is one of the worst of the district . Sand and ....(the German word is Karschuben;not in dictionery.E.D.) During the night 19/20 August Marie took sick with a rheumatic fever, the base of the suffering started from the muscles of the right side of the breast. I only heard about it on August 24, and in the evening of the 25th I was home. I found the situation of my wife very disturbing. Since getting sick, she had eaten almost nothing, she had a severe diarrhea, caused, as she was convinced, by too much drinking of Seltzer-water. She had been cupped (blood-letting, E.D.) after which

she could breath easier, but a painful, strong coughing developed. The family doctor, Dr.Wm. Schieffen declared, after this, that the pleura were somewhat thick, but that the lungs had not been attacked. To my great joy Cecilie Mettenius arrived unsolicited during the evening of August 26. August 29 early the fever was higher, I saw her 3 times during the forenoon, the last time at 1¼ hour, she took then a little milk with tea, said, that she enjoyed this, and complained " I am so benumbed, I do not know at all who I am ". At 2 o.c. the nurse suddenly called my sister in law to the room. Cecilie called me immediately. Mary was in her last gasps. She had sunk back into the pillows, the difficult breathing long drawn out, the eyes still open, the pupils hazy and turned backwards. After a few moments the pulse ceased. An hour later came the doctor, who could only verify the death. We buried her 3 minutes from my home on the nearest graveyard in the afternoon of August 31 at 5 o.c. in the afternoon. As her grave, the future is entirely dark in front of my eyes. In Berlin, mother Braun has again an abscess on the breast. That this will cause her end, is certain. When ? That is the question. Probably very soon. Cecilie is much needed there. She hopes to stay free one month, but then home ! What shall I do with my children of 16 and 8 years age ?

As to your Isoetes I sent your letter right away to Cecilie. The case has not been decided, because Cecilie is away. I wrote to Dr. Wagnus, that he will look for the Isoetes sent by you, which have not been published - and, also, the drawings - they will be .... and the latter sent to me for you. I shall send them then to you.

Nymphaea flava I have here; it increases strongly, but does not flower. From the roots emerge runners. I do not know how to work with them. Nypmphaea tuberosa does it similarly . I had it in the open, where it prospers well but flowers poorly. N. flava I cannot of course keep here in the open.

Your (see note at end of letter) I did receive some time back, and thank you most kindly for them. The amber matter I have not taken in hand since then, but hope, to get to it soon. Of the timber I do not need large pieces, only that large, that the piece should come from an older trunk if possible -. Thin branches I do not reject in an emergency - if a few yearly rings in good development show, and there is a chance for a good crosscut of ¼" square, and for diagonal and tangential cuts. If larger pieces can be obtained, I would like them better. Cecilie searched in the inheritance for the pieces of wood sent by you, but did not find anything specific of that kind. - I found though in an american publication - where, I can not tell unfortunately - a listing of 400 wood types of North America, which were present at the general exhibition in New York. Is'nt it possible, to get something from there ?

I wrote 2 biographies of Braun, one for the Flora of Regensburg, and one for Tasman Journal of Botany: both may be in print. Braun's herbarium, collections and hand-written reports - the latter strangely rich and exemplary, as hardly any other person left something like this behind - have been offered by his (family, E.D.) to the government for M 31,697.- , which is very anxious, to buy them for the royal Garden Museum in Berlin, if only the minister of finance puts the money in the budget. The government wants to buy also the library, which is estimated to contain 5,000 pieces. Before April 1878 the matter can in no way be decided. see note 2 E.D.

I just examined 62 lakes. I travelled into the deserts, where I was with my wagon (the German is "Rungenwagen" a contraption unknown to me. E.D.) and horse, which carried my own boat, specially built for this, and 2 men, just as in Lappland or in previous

.Morning and evening we eat. I found again 4 - 5 lakes with Isoetes, 6 or 7 with Littorella, 4 - 5 with Lobelia Dortmanni

and several with the new microphylla, which Mr. found. The weather was horrible this time. Now, stay well! May you fare better than I, heartiest greetings to your fine wife and Georg. With hearty admiration, Your

R. Caspary

Note 1) by translator E.D.: The German word reads like "Arieuthobien" or something near that.

(translated from German script by Edgar Denison, August 1988)

Note 2) East Prussia is covered by large lakes - The Massurian Lakes, which trapped an entire Russian army in 1914 at the beginning of world-war I.

Rec Oct 12th
Ans Dec 11 1880

[illegible] 22.9.1877

Werther Freund!

Dr. Magnus in Berlin hat
mir Ihre [illegible]
[illegible] über die Isoetes,
die Sie an A. Braun [illegible]
[illegible]. Magnus hat [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

beschäftigt mich.

Seit meinem letzten Briefe hat Nymphaea flava schon 3 Blüthen gebracht. Die letzte [illegible] Tage. Ich habe die Blüthen genau untersucht. Die Pflanze gehört trotz der [illegible] und [illegible] Castalia, nicht zu Lotus, wie ich anfangs vermuthete, [illegible] ich die [illegible] kannte. Leider [illegible] Zeit im Jahre, [illegible] Wetter ist kalt u. regnerisch, [illegible] [illegible] [illegible], die [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

blühen dürfte [illegible] worden,
um gleichzeitig als [illegible]
angelegt sind, von unten [illegible]
beschränkt zu werden. Die [illegible]
[illegible] die Lage des [illegible]
geschossen. Ob dieß [illegible] ist,
[illegible] zu [illegible] der
Wetter ist [illegible], [illegible]
[illegible] [illegible] [illegible]

Ich habe meine [illegible] nach
[illegible]. [illegible]
[illegible] sehr [illegible] an [illegible]
[illegible] [illegible] oder [illegible]
[illegible] unter den
[illegible]
[illegible] nach [illegible] zurück-
[illegible] ich [illegible] 1. October
[illegible] [illegible] der
[illegible] [illegible]

und Offenburg, die mich mit [illegible]
[illegible] u. [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] und [illegible] [illegible]
bekannt.

[illegible] u. [illegible] [illegible]
all und! [illegible] Grüße an
[illegible] u. [illegible] [illegible] [illegible]
[illegible]. Ihr
[illegible]

Rec. Oct. 12
Ans. Nov.26,1880

Königsberg in Prussia, Sept.22,1877

Esteemed Friend !

Dr. Magirus in Berlin sent to me your drawings and written statements about Isoetes, which you had sent to A. Braun. More could not be found. I mail today a small packet to Dr. Felix Flugel, who will get it to you through the Smithonian. I send it registered, to be sure, that he carries the task out..

Since my last letter Nymphaea flave has had 3 blossoms. She flowers in day time. I examined the flowers in detail and the plant belongs despite the runners into the division Castalia, not to Lotus as I assumed then before I knew the flower. Unfortunately it is late in the year and the weather is cold and rainy and the sun shines only sometimes this time of the year, daily or not at all, and it cannot be expected this year that the flowers will produce fruit, the less so, as they are inclined to be fertilized by other flowers. I found the anthers dead on the 1st day of flowering. If this be normal, the future will teach; the weather is too abnormal, that I will have to wait 'til next year.

I have a sister-in-law in the house. Mrs. Braun in Berlin is badly ailing from a newly broken-out, or, rather developed abscess under one arm. ...., will return to Berlin beginning October, and I hope to get by October 1 a distant relation of the Brauns, Miss Sophie Drach from Offenburg, whom I do not know, but whom Mathilde recommends much, into my house.

May you be better off than I. Heartiest greetings to wife and son and best wishes for you

Ron Caspary

(translated from German script by Edgar Denison, July 1988)

Rec. April 7
ans. [illegible] Apl 10

Königsberg in Pr.
Botanischer Garten
18. 3. 1880

Werther Freund!

Ich danke Ihnen bestens für Ihren Brief vom 11. 2. 80. Es thut mir sehr leid, daß Sie [illegible] [illegible] haben. [illegible] Ihren Brief erhielt ich seiner Zeit durch Dr. Wittmack, [illegible] [illegible] [illegible] sehr [illegible] [illegible] [illegible]. Ich [illegible] [illegible] [illegible] [illegible] [illegible] über [illegible] [illegible] [illegible] [illegible]. Für Ihre Quercus u. Coniferen von Californien u. die Catalpa besten Dank. [illegible] habe ich noch nicht erhalten. Auch erhielt ich Samen von Catalpa speciosa. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] sehr [illegible]. Ich [illegible] [illegible] [illegible] für die [illegible] [illegible] [illegible]. Von Dr. Wittmack [illegible] [illegible] [illegible] [illegible] (Thuja gigantea u. and.), [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. Es [illegible] [illegible], daß [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. [illegible] [illegible] [illegible] [illegible] Abies excelsa [illegible] Spiraea [illegible] [illegible] [illegible], [illegible] [illegible] [illegible] [illegible] [illegible], Larix [illegible] [illegible] ich [illegible] [illegible] [illegible] [illegible], [illegible] [illegible] [illegible].

Ich [illegible] mich seit dem 12. Febr. in der [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] im Botan. Garten. [illegible] 2 [illegible] [illegible] 12 [illegible].

[illegible]

muß, aber die [illegible] sind sehr [illegible]
[illegible], 16 Jahr alt, ist auf [illegible], recht
[illegible] u. [illegible]
[illegible]
[illegible]
[illegible]
Marie, 10 Jahr alt, ist ein [illegible] sehr [illegible]
[illegible] Kind, der Mutter ähnlich, wenn auch nicht
so begabt, [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

Winter 78/79 habe ich die [illegible]
[illegible]
[illegible]
u. kaum 1/10 [illegible] von den [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

[illegible]

19 [illegible] Jahren [illegible]

[illegible] 4 Danzigen [illegible]

[illegible] 2 Jahren [illegible]

[illegible] Danzig [illegible]

[illegible] 229 [illegible]

[illegible] 2 [illegible]

[illegible] 2 [illegible]

[illegible] Nymphaea [illegible]

[illegible] Nymphaeaceen [illegible]

[illegible]

not complete!

Rec. April 7
Ans. " 10

Königsberg in Prussia
Royal Botanical Garden
March 18, 1880

Esteemed Friend !

I thank you ver much for your letter of Feb. 11,'80. I am very sorry, that you had to go through so much difficulties lately. I heard about the loss of your wife at the time through Mrs. Mettenius, and, also, that Georg was severely sick with cadaver poisoning. I am glad, that you can at least give good news about yourself. For the Quercus and conifers from California and the Catalpa best thanks. More I have not yet received. I further received seeds of Catalpa speciosa. Will probably not prosper in our climate. The dissertation about the California conifers is most welcome. I need is for the conifers of Bronsteins (? E.D.) From Mrs. Mettenius I was given for you a few conifers (Thuya gigantea and others), which Braun had put together for you. There is so little, that it is hardly worth - while to go through the Smithonian for shipment. Less known essays,

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pieces with leaf-sprouts on the roots, Isoetes echinospora, I just mailed to you by post.

I am in the very disagreable situation since Feb. 12 in moving into the new institution building in the Urban Garden. There are two floors with 12 windows

(between bottom of page 1 and top of page 2 there is something missing. E.D.)

.... width and looks quite imposing. It will offer for 50 years or more a longish hall for the collections, which present our work. Below are two auditoria and my residence of 10 rooms, kitchen, pantry; the basement is very spacious but not deep enough, and I fear, the floor in my home will be very cold, which I fear specially, and which is very disagreable to me, as I had become quite rheumatic in Bonn in my feet and legs, of which I recovered slowly. If you come ever again to Europe, take quarters with me,

the longer the better. I have a home manager, a Miss Drach, sister if the engineer Drach in Karlsruhe, the husband of Mathilde Zimmer's daughter, who is traffic director in Karlsruhe, who does the house-keeping and looks after the children. Unfortunately much is not as desired. A wife cannot be substituted by anything, especially when she was so outstanding as mine. Our family life is impoverished and our spiritual verve. Mathilde, 19 years old, is the oldest daughter, is still too withdrawn, shy not made for the impact of business nad household, but rather for language studies, she is not yet capable, to direct the household and all that goes with it, to handle by her-self. Diphtheria, which she had when 2 years old, robbed her unfortunately of the vigour in contact with the outer world; her legs were lame for almost ¼ year. Mathilda strives much to compensate for the impediments, which burden her and is specially attentive to me, but progress is very slow. Hans is in Untersecunda (the 3rd year be-fore ending the gymnasium studies, E.D.), quite fit, practical and of a good nature. Unfortunately, he does not know, what he wants to be-come. His great inclination toward mineralogy has been suppressed unfortunately through school work. Marie, 10 years old, is a heal-thy, very kind child, resembling her mother, though not as gifted, the darling of all who get to meet her. Unfortunately, the glands of the throat and the mucous membrances are highly sensitive, just as with my late wife, and cause in me apprehension. I wished, that it would be soon possible for Mathilda to take over the household.-

In the Winter of 78/79 I advanced the plants of the .... desert a good deal - there are rather many in private collections here, though they are generally very rare and hardly 1/10 % of the endemic ones. Grüggert's originals, belonging now to the State, I have in hands for treatment.

Unfortunately Göggert is a serious impediment in the description of the problem because he does not publish a comprehensive dissertation about ....,which He has in hands since December now and probably will never publish it. He put many nambers into the world without a description. The material for this work is based primarly in the collection of the teacher Menge, in Danzig who now is dead ; What will become of this collection I do not know, but, without doubt, it will not ever become available to me, because since the separation of the Province Prussia into East- and West-Prussia,the people of Danzig have turned quite fanatically against East Prussia and specifically Königsberg,though they do not possess the strengts and ways, except money, to put themselves in a scientific way on their own feet,with the only result, that their works remain lying on the side and can not be used,because they are not able to come up with certainties. I organized 19 years ago a florishing botanical society in the Province Prussia. Four members from Danzig resigned 2 years back and founded a west-prussian Northern-zoological Society, which can not accomplish anything, but which exists thanks to the money authorized by the west-prussian diet , and acts in a blown-up manner. Bail in Danzig, professor on a real-school (non-classical, secondary school, E.D.) is the group leader ______________

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causes me to lose much time. It is well known, that one knew only very imprecise facts about plant distribution even in Germany, also in Prussia, and the prussian species society, now 324 members strong, is forced to explore district by district through emissaries. 2 districts have been examined carefully. I made the seed - examinations. Now I want to publish the results. That takes very much time. 2 assistants worked recebtly together 7 hours on the

organization of the material prepared and collected by me, and the final editing will take also a lot of time. - For Nymphaea studies I had lately little time, however the variation of the disk (the top of stigmas) (? E.D.) with Nuphar were worked up. This is most remarkable. Nymphaceae have been worked on; in it for the 1st time appears a correct diagnosis of Nymphaeae alba and candida and their kinds of species. Now shall the Nymphaceae be attacked again seriously as I get now space. In the cramped home I could not do anything right due to lack of space. Soon more. Greetings to Georg, in greatest friendship Your

R. Caspary

(translated from German script by Edgar Denison, August 1988)